

Nos. 18-1654 & 18-1782

IN THE
United States Court of Appeals
FOR THE SIXTH CIRCUIT

FIRSTENERGY GENERATION, LLC,
Petitioner/Cross-Respondent,
v.
NATIONAL LABOR RELATIONS BOARD,
Respondent/Cross-Petitioner.

PETITION FOR REVIEW OF THE DECISION AND ORDER OF THE NATIONAL LABOR
RELATIONS BOARD IN *FIRSTENERGY GENERATION, LLC*, A WHOLLY OWNED SUBSIDIARY
OF *FIRSTENERGY CORP.*, AND *INTERNATIONAL BROTHERHOOD OF ELECTRICAL*
WORKERS, LOCAL 272, AFL-CIO, CASE NOS. 06–CA–163303 AND 06–CA–170901,
REPORTED AT 366 NLRB No. 87

**APPENDIX OF PETITIONER/CROSS-RESPONDENT
VOLUME II**

PETER N. KIRSANOW
RICHARD E. HEPP
BENESCH, FRIEDLANDER, COPLAN &
ARONOFF LLP
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Cleveland, Ohio 44114-2378
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*Attorneys for Petitioner/Cross-Respondent
FirstEnergy Generation, LLC*

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Respectfully submitted,

/s/ Peter N. Kirsanow

PETER N. KIRSANOW (0034196)

RICHARD E. HEPP (0090448)

Benesch, Friedlander, Coplan & Aronoff
LLP

200 Public Square, Suite 2300

Cleveland, Ohio 44114-2378

Telephone: 216.363.4500

Facsimile: 216.363.4588

*Attorneys for Petitioner/Cross-
Respondent FirstEnergy Generation,
LLC*

CERTIFICATE OF COUNSEL

I, Peter N. Kirsanow, pursuant to 6 Cir. R. 30(b)(4)(E) hereby certify that the documents contained in this appendix are properly part of the Agency Record in this matter.

/s/ Peter N. Kirsanow

PETER N. KIRSANOW (0034196)

*One of the Attorneys for Petitioner/Cross-
Respondent FirstEnergy Generation, LLC*

CERTIFICATE OF SERVICE

A copy of the foregoing was filed electronically on the 1st day of October, 2018, and served according to the Court's Electronic Filing guidelines.

/s/ Peter N. Kirsanow

PETER N. KIRSANOW (0034196)

*One of the Attorneys for Petitioner/Cross-
Respondent FirstEnergy Generation, LLC*

GENERAL COUNSEL EXHIBITS
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION SIX

FIRST ENERGY CORPORATION

Employer

and

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION
272, AFL-CIO

Petitioner

Case No. 06-CA-163303
No. 06-CA-170901

Place: Pittsburgh, Pennsylvania

Date: Thursday, December 1, 2016

MORSE, GANTVERG & HODGE, INC.
Suite 719, One Bigelow Square
Pittsburgh, Pennsylvania 15219
412/281-0189

INDEX AND DESCRIPTION OF FORMAL DOCUMENTS

General Counsel's Exhibit No. 1:

- 1 (a) Charge in Case 06-CA-163303 dated November 4, 2015.
- 1 (b) Affidavit of Service of 1(a) dated November 4, 2015.
- 1 (c) First Amended Charge in Case 06-CA-163303 dated February 29, 2016.
- 1 (d) Affidavit of Service of 1(c) dated February 29, 2016.
- 1 (e) Charge in Case 06-CA-170901 dated March 2, 2016.
- 1 (f) Affidavit of Service of 1(e) dated March 3, 2016.
- 1 (g) Complaint and Notice of Hearing in Case 06-CA-163303 with forms NLRB 4338 and NLRB-4668 dated May 27, 2016.
- 1 (h) Affidavit of Service of 1(f) dated May 27, 2016.
- 1 (i) Answer and Affirmative Defenses of Respondent FirstEnergy Corp., received June 9, 2016.
- 1 (j) Respondents Request for Postponement of Hearing received June 19, 2016.
- 1 (k) Order Rescheduling Hearing dated July 19, 2016.
- 1 (l) Affidavit of Service of 1(j) dated July 19, 2016.
- 1 (m) Complaint and Notice of Hearing of 06-CA-170901 with forms NLRB 4338 and NLRB-4338 dated July 29, 2016.
- 1 (n) Affidavit of Service of Case 06-CA-170901 1(m) dated July 29, 2016.
- 1 (o) Answer and Affirmative Defenses of Respondent FirstEnergy Corp., et al. received August 11, 2016.
- 1 (p) Order Rescheduling Hearing dated September 7, 2016.
- 1 (q) Affidavit of Service of 1(p) dated September 7, 2016.
- 1 (r) Order Consolidating Cases 06-CA-163303 and 06-CA-170901 dated November 10, 2016.

EXHIBIT NO. _____ RECEIVED ✓ REJECTED _____
GAL(a)-1(+)

CASE NO. 06-CA-163305 CASE NAME FirstEnergy Corp.
06-CA-17908

NO. OF PAGES 56 DATE 12/1/14 REPORTER in

- 2 -

1 (s) Affidavit of Service of 1(r) dated November 10, 2016.

1 (t) Index and Formal Description of Documents

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION CORP.

and

Cases 06-CA-163303 and
06-CA-170901

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO

AFFIDAVIT OF SERVICE OF: Order Consolidating Cases dated November 10, 2016.

I, the undersigned employee of the National Labor Relations Board, being duly sworn, say that on November 10, 2016, I served the above-entitled document(s) by **certified or regular mail**, as noted below, upon the following persons, addressed to them at the following addresses:

FirstEnergy Generation Corp.
Rose Gobell, Human Resource Director
76 S. Main Street
Akron, OH 44308-1812

**CERTIFIED MAIL, RETURN RECEIPT
REQUESTED**

2016 0910 0000 4055 3687

Brian W. Easley, Esquire
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

FIRST CLASS MAIL

Allyson C. Werntz, Esquire
Jones, Day
77 West Wacker Drive
Chicago, IL 60601-1692

FIRST CLASS MAIL

FirstEnergy Corporation and/or FirstEnergy
Generation LLC
Charles Cookson, Exec. Dir. of Labor Rel.
76 S Main St
Akron, OH 44308-1812

**CERTIFIED MAIL, RETURN RECEIPT
REQUESTED**

2016 0910 0000 4055 3830

David S. Farkas, Esquire
FirstEnergy Service Co.
76 S. Main Street
Akron, OH 44308-1812

FIRST CLASS MAIL

165

Marianne Oliver, Esquire
Gilardi, Oliver & Lomupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

FIRST CLASS MAIL

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Ave.
Midland, PA 15059-1512

CERTIFIED MAIL

7016 0910 0000 4055 3885

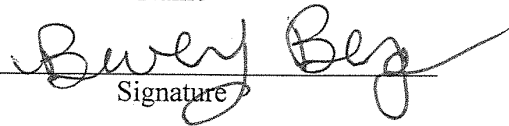
November 10, 2016

Date

Beverly Berger

Designated Agent of NLRB

Name



Signature

7016 0910 0000 4055 3687

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Extra Services & Fees (check box, add fee as appropriate)

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<input type="checkbox"/> Return Receipt (electronic)	\$ _____
<input type="checkbox"/> Certified Mail Restricted Delivery	\$ _____
<input type="checkbox"/> Adult Signature Required	\$ _____
<input type="checkbox"/> Adult Signature Restricted Delivery	\$ _____

Postmark Here

Postage
 \$ _____

Total
 \$ _____

Sent To
 FirstEnergy Generation Corp.
 Rose Gobell, Human Resource Director
 76 S. Main Street
 Akron, OH 44308-1812

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$ _____
<input type="checkbox"/> Return Receipt (electronic)	\$ _____
<input type="checkbox"/> Certified Mail Restricted Delivery	\$ _____
<input type="checkbox"/> Adult Signature Required	\$ _____
<input type="checkbox"/> Adult Signature Restricted Delivery	\$ _____

Postmark Here

Postage
 \$ _____

Total
 \$ _____

Sent To
 International Brotherhood of Electrical
 Workers, Local Union No. 272, AFL-CIO
 838A Midland Ave. ✕
 Midland, PA 15059-1512

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Certified Mail Fee
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Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$ _____
<input type="checkbox"/> Return Receipt (electronic)	\$ _____
<input type="checkbox"/> Certified Mail Restricted Delivery	\$ _____
<input type="checkbox"/> Adult Signature Required	\$ _____
<input type="checkbox"/> Adult Signature Restricted Delivery	\$ _____

Postmark Here

Postage
 \$ _____

Total
 \$ _____

Sent To
 FirstEnergy Corporation and/or FirstEnergy
 Generation LLC
 Charles Cookson, Exec. Dir. of Labor Rel.
 76 S Main St
 Akron, OH 44308-1812

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

CERTIFIED MAIL

PLACE STICKER AT TOP OF ENVELOPE, FOLD AT POSTAGE LINE

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X</p> <p style="text-align: right;"><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>	
<p>1. FirstEnergy Corporation and/or FirstEnergy Generation LLC Charles Cookson, Exec. Dir. of Labor Rel. 76 S Main St Akron, OH 44308-1812</p>		<p>B. Received by (Printed Name)</p> <p>C. Date of Delivery</p>	
<p>2. Article Numl (Transfer fro) 7016 0910 0000 4055 3830</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes 3, enter delivery address below: <input type="checkbox"/> No</p>	
<p>PS Form 3811, February 2004</p>		<p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
<p>Domestic Return Receipt</p>		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

102595-02-M-1540

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X</p> <p style="text-align: right;"><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>	
<p>1. FirstEnergy Corporation and/or FirstEnergy Generation LLC Charles Cookson, Exec. Dir. of Labor Rel. 76 S Main St Akron, OH 44308-1812</p>		<p>B. Received by (Printed Name) Daryl Duff</p> <p>C. Date of Delivery</p>	
<p>2. Article Numl (Transfer fro) 7016 0910 0000 4055 3830</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes 3, enter delivery address below: <input type="checkbox"/> No</p>	
<p>PS Form 3811, February 2004</p>		<p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
<p>Domestic Return Receipt</p>		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

102595-02-M-1540

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>X</p>	
<p>1. Article Addressed to:</p> <p>FirstEnergy Generation Corp. Rose Gobell, Human Resource Director 76 S. Main Street Akron, OH 44308-1812</p>		<p>B. Received by (Printed Name) C. Date of Delivery</p>	
<p>2. Article Number (Transfer from service label)</p> <p>7016 0910 0000 4055 3687</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If YES, enter delivery address below:</p>	
<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>X</p>	
<p>1. Article Addressed to:</p> <p>FirstEnergy Generation Corp. Rose Gobell, Human Resource Director 76 S. Main Street Akron, OH 44308-1812</p>		<p>B. Received by (Printed Name) C. Date of Delivery</p> <p>DARYL Duff</p>	
<p>2. Article Number (Transfer from service label)</p> <p>7016 0910 0000 4055 3687</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If YES, enter delivery address below:</p>	
<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION, LLC.

and

Cases 06-CA-163303 and
06-CA-170901

INTERNATIONAL BROTHERHOOD OF ELECTRICAL
WORKERS, LOCAL UNION NO. 272, AFL-CIO

ORDER CONSOLIDATING CASES

Upon a charge filed by International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO, herein called "the Union," on November 4, 2015, and amended on February 29, 2016, a Complaint and Notice of Hearing issued in Case 06-CA-163303 on May 27, 2016, against FirstEnergy Generation Corp., herein called by its correct name, "FirstEnergy Generation, LLC" and herein called "Respondent FirstEnergy Generation, LLC." Further, upon a charge filed by the Union on March 2, 2016, against FirstEnergy Corp., herein called by its correct name, "FirstEnergy Generation, LLC" and herein called, "Respondent FirstEnergy Generation, LLC," a Complaint and Notice of Hearing issued in Case 6-CA-170901 on July 29, 2016.

Based thereon, and in order to avoid unnecessary costs or delay, the General Counsel, by the undersigned, pursuant to Section 102.33 of the Rules and Regulations of the National Labor Relations Board, **ORDERS** that these cases be, and they hereby are, consolidated.

Dated: November 10, 2016



NANCY WILSON
REGIONAL DIRECTOR
NATIONAL LABOR RELATIONS BOARD
REGION 06
1000 Liberty Ave. Rm 904
Pittsburgh, PA 15222-4111

160

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION CORP.

and

Cases 06-CA-163303 and
06-CA-170901

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO

AFFIDAVIT OF SERVICE OF ORDER RESCHEDULING HEARING

I, the undersigned employee of the National Labor Relations Board, being duly sworn, say that on September 7, 2019, I served the above-entitled document(s) by **regular mail** upon the following persons, addressed to them at the following addresses:

FirstEnergy Generation Corp.
Rose Gobell, Human Resource Director
76 Main Street
Akron, OH 44308-1812

David S. Farkas, Esq.
FirstEnergy Generation Corp.
76 S Main St 15th Floor
Akron, OH 44308

Brian W. Easley, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

Allyson C. Werntz, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

Marianne Oliver, Esq.
Gilardi, Oliver & Lomupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

169

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Avenue
Midland, PA 15059-1512

FirstEnergy Corporation
Charles Cookson, Exec. Dir. of Labor Rel.
76 S. Main Street
Akron, OH 44308-1812

David S. Farkas, Esq.
FirstEnergy Service Co.
76 Main Street
Akron, OH 44308-1812

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Avenue
Midland, PA 15059

September 7, 2016

Date

Jacquetta M. Keeton,
Designated Agent of NLRB

Name

/s/ Jacquetta M. Keeton

Signature

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION CORP.

and

Cases 06-CA-163303 and
06-CA-170901

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO

Based on scheduling needs, and after consultation with the parties,

IT IS HEREBY ORDERED that the hearing in the above-entitled matters is
rescheduled from October 5, 2016 at 10:00 am to December 1, 2016 at 10:00 am at William S.
Moorhead Federal Building, 1000 Liberty Avenue, Room 904, Pittsburgh, PA,

The hearing will continue on consecutive days until concluded.

Dated: September 7, 2016



Nancy Wilson
Regional Director
National Labor Relations Board
Region 06
1000 Liberty Ave Rm 904
Pittsburgh, PA 15222-4111

16P

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION SIX

FIRSTENERGY GENERATION, LLC.

and

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL 272,
AFL-CIO

Case No.: 06-CA-170901

**ANSWER AND AFFIRMATIVE DEFENSES OF
RESPONDENT FIRSTENERGY CORP., ET AL**

Respondent FIRSTENERGY GENERATION, LLC (incorrectly named “FirstEnergy Corporation” in the Complaint) (“FirstEnergy” or “Respondent”), files this Answer and Affirmative Defenses to the General Counsel’s Complaint and Notice of Hearing (“Complaint”), pursuant to Rules 102.20 and 102.21 of the Rules and Regulations of the National Labor Relations Board (“NLRB” or “Board”), and in support states as follows:

ANSWER

1. (a) Respondent admits the allegations set forth in paragraph 1(a) of the Complaint.

(b) Respondent admits only that FirstEnergy Generation, LLC, the correct employer in this case, has an office and place of business in Akron, Ohio, and is engaged in the operation of electric power generation plants in several states including the Bruce Mansfield plant located in Shippingport, Pennsylvania. Each and every other allegation in this paragraph of the Complaint that is not specifically admitted is, accordingly, denied.

2. Respondent admits the allegations set forth in paragraph 2 of the Complaint.

3. (a) Respondent admits the allegations set forth in paragraph 3(a) of the Complaint.

(b) Respondent admits the allegations set forth in paragraph 3(b) of the Complaint.

4. Respondent admits the allegation set forth in paragraph 4 of the Complaint

5. Respondent admits the allegations set forth in paragraph 5 of the Complaint.

6. Respondent only admits that, during all times material to the allegations in the Complaint, the following individuals were supervisors or agents within the meaning of the National Labor Relations Act ("NLRA" or "Act"):

Chuck Cookson – Executive Director, Labor Relations.
James Graf – Plant Director, Bruce Mansfield Plant
Paul Rundt – Operations Manager, Bruce Mansfield Plant
Chris Cox – Maintenance Manager, Bruce Mansfield Plant

Each and every other allegation set forth in this paragraph which is not specifically admitted is, accordingly, denied.

7. Respondent admits only that it recognizes the International Brotherhood of Electrical Workers Local Union No. 272, AFL-CIO ("Union") as the exclusive collective bargaining representative for employees in the appropriate bargaining unit certified by the NLRB in Case No. 06-RC-7962, and that such unit is comprised of all production and maintenance employees, including Control Room Operators, employees in the Stores, Electrical, Maintenance, Operations, I&T, and Yard Departments at the Bruce Mansfield plant, excluding technicians, office clerical employees, other professional employees and supervisors as defined in the Act. Each and every other allegation set forth in this paragraph which is not specifically admitted is, accordingly, denied.

8. Respondent admits the allegations contained in Paragraph 8 of the Complaint.

9. Respondent admits the allegations contained in Paragraph 9 of the Complaint

10. Respondent denies the allegation set forth in paragraph 10 of the Complaint.

11. Respondent denies the allegations set forth in paragraph 11 of the Complaint.
12. Respondent denies the allegations set forth in paragraph 12 of the Complaint.
13. (a) Respondent denies the allegations set forth in paragraph 13(a) of the Complaint.

(b) Respondent denies the allegations set forth in paragraph 13(b) of the Complaint.
14. Respondent denies the allegations set forth in paragraphs 14(a) and (b) of the Complaint.
15. Respondent denies the allegations set forth in paragraph 15 of the Complaint.
16. Respondent denies the allegations set forth in paragraph 16 of the Complaint.

AFFIRMATIVE DEFENSES

First Affirmative Defense

To the extent that any of the allegations set forth in the Complaint are based upon acts or occurrences which were not within the scope of a timely unfair labor practice charge filed by the Union, the NLRB lacks jurisdiction over any alleged violation of the NLRA based upon such allegations.

Second Affirmative Defense

To the extent that any of the allegations set forth in the Complaint are based upon acts or occurrences which were not within the scope of a timely unfair labor practice charge filed by the Union, these allegations are untimely and therefore barred by Section 10(b) of the Act.

Third Affirmative Defense

The unfair labor practice charge in this case is barred, in whole or in part, because after receiving notice of the Respondent's intention to utilize subcontractors, the Union waived its bargaining rights by its failure to promptly request bargaining with respect to the use of subcontractors.

Fourth Affirmative Defense

The unfair labor practice charge in this case is barred, in whole or in part, by the equitable doctrine of estoppel.

Fifth Affirmative Defense

The unfair labor practice charge in this case is barred, in whole or in part, because the Union failed or refused to engage in good faith bargaining with Respondent in violation of Section 8(b)(3) of the Act

Sixth Affirmative Defense

The unfair labor practice allegations in the Complaint are barred, in whole or in part, because the information requested by the Union is not presumptively relevant and the Union failed to provide any legitimate justification for its information requests. Further, the information requested by the Union is not relevant to the Union's performance of its duties as a collective bargaining representative.

Seventh Affirmative Defense

The unfair labor practice charge in this case is barred, in whole or in part, because the Union's information request is overly broad, unduly, propounded in an attempt to harass the Respondent, and/or are not made in good faith.

Eighth Affirmative Defense

The unfair labor practice charge in this case is barred, in whole or in part, because the Complaint contains allegations that are inaccurate, untrue, or incomplete, and thus fails to state facts sufficient to constitute a violation of the Act.

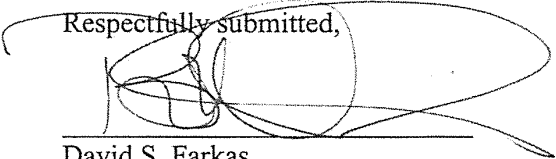
Ninth Affirmative Defense

The unfair labor practice charge in this case is barred, in whole or in part, because any alleged actions or omissions by Respondents were justified by applicable law.

WHEREFORE, having fully answered the Complaint, and having denied any and all alleged unlawful conduct, Respondent respectfully requests that the Complaint be dismissed in its entirety; that the General Counsel and Charging Party take nothing by way of the Complaint; and that the NLRB award Respondents all other appropriate relief.

Dated: August 11, 2016

Respectfully submitted,



David S. Farkas
FIRSTENERGY
76 S. Main Street
Akron, OH 44308
Telephone: (330) 384-4844
Facsimile: (330) 384-3875

Brian West Easley
Allyson Wertz
JONES DAY
77 West Wacker Drive
Suite 3500
Chicago, IL 60601-1692
Telephone: (312) 782-3939
Facsimile: (312) 782-8585

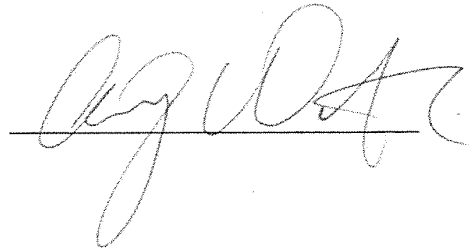
ATTORNEYS FOR RESPONDENT
FIRST ENERGY GENERATION, LLC

CERTIFICATE OF SERVICE

I hereby certify that, on this 11 day of August, 2016, I electronically filed the foregoing Answer and Affirmative Defenses of Respondent to the Complaint and Notice of Hearing. In addition, a copy of the document was sent via regular U.S. mail, postage prepaid, to the following:

International Brotherhood of Electrical Workers,
Local Union No. 272, AFL-CIO
838A Midland Ave.
Midland, PA 15059

Marianne Oliver, Esq.
Gilardi, Oliver & Lamupo, P.A.
223 Fourth Ave., 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

A handwritten signature in dark ink, appearing to read "M. Oliver", is written over a horizontal line.

Form NLRB-4668
(6-2014)

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY CORPORATION

and

Case 06-CA-170901

INTERNATIONAL BROTHERHOOD OF ELECTRICAL
WORKERS, LOCAL UNION NO. 272, AFL-CIO

AFFIDAVIT OF SERVICE OF: Complaint and Notice of Hearing with forms NLRB-4338
and NLRB-4668 attached dated July 29, 2016.

I, the undersigned employee of the National Labor Relations Board, being duly sworn, say that
on July 29, 2016, I served the above-entitled document(s) by **certified or regular mail**, as
noted below, upon the following persons, addressed to them at the following addresses:

FirstEnergy Corporation
Charles Cookson, Exec. Dir. of Labor Rel.
76 S Main St
Akron, OH 44308-1812

CERTIFIED MAIL, RETURN RECEIPT
REQUESTED

no 15 3010 0001 6922 1222

David S. Farkas, Esq.
FirstEnergy Service Co.
76 Main Street
Akron, OH 44308-1812

REGULAR MAIL

Brian W. Easley, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

REGULAR MAIL

Allyson C. Werntz, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

REGULAR MAIL

Marianne Oliver, Esquire
Gilardi, Oliver & Lomupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

REGULAR MAIL

(OVER)

167

Appendix000413

Form NLRB-4668
(6-2014)

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Avenue
Midland, PA 15059-1512

CERTIFIED MAIL

7015 3010 0001 6922 1246

7015 3010 0001 6922 1246

July 29, 2016

Date

Beverly Berger
Designated Agent of NLRB

Name

Beverly Berger
Signature

7015 3010 0001 6922 1246

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ®.	
OFFICIAL USE	
Certified Mail Fee	
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Pos	
To:	International Brotherhood of Electrical
Sen.	Workers, Local Union No. 272, AFL-CIO
Str.	838A Midland Avenue
City	Midland, PA 15059-1512
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

7015 3010 0001 6922 1222

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ®.	
OFFICIAL USE	
Certified Mail Fee	
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Post:	
To:	FirstEnergy Corporation
Sen.	Charles Cookson, Exec. Dir. of Labor Rel.
Str.	76 S Main St
City, State, ZIP+4®	Akron, OH 44308-1812
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 		A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee	
1. Article Addressed to: FirstEnergy Corporation Charles Cookson, Exec. Dir. of Labor Rel. 76 S Main St Akron, OH 44308-1812 06-CA-170901		B. Received by (Printed Name)	C. Date of Delivery
		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
		Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	
2. Article 7015 3010 0001 6922 1222 (Transfer from service label)		CPT	
PS Form 3811, February 2004		Domestic Return Receipt 102595-02-M-1540	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 		A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee	
1. Article Addressed to: FirstEnergy Corporation Charles Cookson, Exec. Dir. of Labor Rel. 76 S Main St Akron, OH 44308-1812 06-CA-170901		B. Received by (Printed Name) DARYL DUFF	C. Date of Delivery
		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
		Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	
2. Article 7015 3010 0001 6922 1222 (Transfer from service label)		CPT	
PS Form 3811, February 2004		Domestic Return Receipt 102595-02-M-1540	

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY CORPORATION

and

Case 06-CA-170901

INTERNATIONAL BROTHERHOOD OF ELECTRICAL
WORKERS, LOCAL UNION NO. 272, AFL-CIO

COMPLAINT AND NOTICE OF HEARING

This Complaint and Notice of Hearing is based on a charge filed by International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO (Charging Party or the Union). It is issued pursuant to Section 10(b) of the National Labor Relations Act (the Act), 29 U.S.C. § 151 et seq., and Section 102.15 of the Rules and Regulations of the National Labor Relations Board (the Board) and alleges that FirstEnergy Corporation (Respondent) has violated the Act as described below.

1. The charge in this proceeding was filed by the Charging Party on March 2, 2016, and a copy was served on Respondent by U.S. mail on March 3, 2016.

2. At all material times, Respondent has been a corporation with an office and place of business in Akron, Ohio, and has been engaged in the operation of electric generation plants in several states, including the Bruce Mansfield plant located in Shippingport, Pennsylvania (Respondent's Bruce Mansfield facility).

3. (a) In conducting its operations described above in paragraph 2 during the 12-month period ending February 29, 2016, Respondent derived gross revenues in excess of \$250,000.

(b) During the 12-month period ending February 29, 2016, Respondent in conducting its operations described above in paragraph 2, purchased and received at its

Shippingport, Pennsylvania, facility goods valued in excess of \$50,000 directly from points outside the Commonwealth of Pennsylvania.

4. At all material times, Respondent has been an employer engaged in commerce within the meaning of Section 2(2), (6), and (7) of the Act.

5. At all material times, the Charging Party has been a labor organization within the meaning of Section 2(5) of the Act.

6. At all material times, the following individuals held the positions set forth opposite their respective names and have been supervisors of Respondent within the meaning of Section 2(11) of the Act and/or agents of Respondent within the meaning of Section 2(13) of the Act:

Charles Cookson	-	Executive Director of Labor Relations
James Graff	-	Plant Director, Bruce Mansfield
Paul Rundt	-	Operations Manager, Bruce Mansfield
Chris Cox	-	Maintenance Supervisor, Bruce Mansfield

7. The following employees of Respondent (the Unit) constitute a unit appropriate for the purposes of collective bargaining within the meaning of Section 9(b) of the Act:

All production and maintenance employees, including control room operators, employees in the stores, electrical, maintenance, operations, results, and yard departments, employed at Respondent's Shippingport, Pennsylvania, facility; excluding technicians, office clerical employees and guards, professional employees and supervisors as defined in the Act.

8. For many years and at all material times, Respondent has recognized the Union as the exclusive collective-bargaining representative of the Unit. This recognition has been embodied in successive collective-bargaining agreements, the most recent of which was effective from December 5, 2009, to February 15, 2013, as extended by agreement of the parties until February 15, 2014.

9. At all material times, based on Section 9(a) of the Act, the Union has been the exclusive collective-bargaining representative of the Unit.

10. Since about January 1, 2016, Respondent subcontracted to outside companies bargaining unit work associated with the planned outage in Unit 1 at Respondent's Bruce Mansfield facility.

11. The subject set forth above in paragraph 10 relates to wages, hours, and other terms and conditions of employment of the Unit and is a mandatory subject for the purposes of collective bargaining.

12. Respondent engaged in the conduct described above in paragraph 10 without prior notice to the Union and without affording the Union an opportunity to bargain with Respondent with respect to this conduct and the effects of this conduct.

13. (a) Since about February 10, 2016, the Union has requested in writing that Respondent provide the Union with the following information: Costs to Respondent of wages and materials for work performed by subcontractors in connection with the 2016 planned outage of Unit 1 at Respondent's Bruce Mansfield facility.

(b) The information requested by the Union, as described above in paragraph 13(a) is necessary for, and relevant to, the Union's performance of its duties as the exclusive collective-bargaining representative of the Unit.

14. Since about February 10, 2016, Respondent has failed and refused to provide the Union with the information that it requested, described above in paragraph 13(a).

15. By the conduct described above in paragraphs 10, 12 and 14, Respondent has been failing and refusing to bargain collectively and in good faith with the exclusive collective-bargaining representative of its employees in violation of Section 8(a)(1) and (5) of the Act.

16. The unfair labor practices of Respondent described above affect commerce within the meaning of Section 2(6) and (7) of the Act.

ANSWER REQUIREMENT

Respondent is notified that, pursuant to Sections 102.20 and 102.21 of the Board's Rules and Regulations, it must file an answer to the complaint. The answer must be **received by this office on or before August 13, 2016, or postmarked on or before August 12, 2016.** Respondent should file an original and four copies of the answer with this office and serve a copy of the answer on each of the other parties.

An answer may also be filed electronically through the Agency's website. To file electronically, go to www.nlr.gov, click on **E-File Documents**, enter the NLRB Case Number, and follow the detailed instructions. The responsibility for the receipt and usability of the answer rests exclusively upon the sender. Unless notification on the Agency's website informs users that the Agency's E-Filing system is officially determined to be in technical failure because it is unable to receive documents for a continuous period of more than 2 hours after 12:00 noon (Eastern Time) on the due date for filing, a failure to timely file the answer will not be excused on the basis that the transmission could not be accomplished because the Agency's website was off-line or unavailable for some other reason. The Board's Rules and Regulations require that an answer be signed by counsel or non-attorney representative for represented parties or by the party if not represented. See Section 102.21. If the answer being filed electronically is a pdf document containing the required signature, no paper copies of the answer need to be transmitted to the Regional Office. However, if the electronic version of an answer to a complaint is not a pdf file containing the required signature, then the E-filing rules require that such answer containing the required signature continue to be submitted to the Regional Office by traditional means within three (3) business days after the date of electronic filing. Service of the answer on each of the other parties must still be accomplished by means allowed under the Board's Rules and Regulations. The answer may not be filed by facsimile transmission. If no answer is filed, or if an answer is filed untimely, the Board may find, pursuant to a Motion for Default Judgment, that the allegations in the complaint are true.

NOTICE OF HEARING

PLEASE TAKE NOTICE THAT on October 5, 2016, at 10:00 a.m. at the National Labor Relations Board, Region 6 Offices, William S. Moorhead Federal Building, 1000 Liberty Avenue, Room 904, Pittsburgh, PA, and on consecutive days thereafter until concluded, a hearing will be conducted before an administrative law judge of the National Labor Relations Board. At the hearing, Respondent and any other party to this proceeding have the right to appear and present testimony regarding the allegations in this complaint. The procedures to be followed at the hearing are described in the attached Form NLRB-4668. The procedure to request a postponement of the hearing is described in the attached Form NLRB-4338.

Dated: July 29, 2016



NANCY WILSON
REGIONAL DIRECTOR
NATIONAL LABOR RELATIONS BOARD
REGION 06
1000 Liberty Ave Rm 904
Pittsburgh, PA 15222-4111

Attachments

Form NLRB-4668
(6-2014)

UNITED STATES GOVERNMENT
NATIONAL LABOR RELATIONS BOARD
NOTICE

Case 06-CA-170901

The issuance of the notice of formal hearing in this case does not mean that the matter cannot be disposed of by agreement of the parties. On the contrary, it is the policy of this office to encourage voluntary adjustments. The examiner or attorney assigned to the case will be pleased to receive and to act promptly upon your suggestions or comments to this end.

An agreement between the parties, approved by the Regional Director, would serve to cancel the hearing. However, unless otherwise specifically ordered, the hearing will be held at the date, hour, and place indicated. Postponements **will not be granted** unless good and sufficient grounds are shown **and** the following requirements are met:

- (1) The request must be in writing. An original and two copies must be filed with the Regional Director when appropriate under 29 CFR 102.16(a) or with the Division of Judges when appropriate under 29 CFR 102.16(b).
- (2) Grounds must be set forth in **detail**;
- (3) Alternative dates for any rescheduled hearing must be given;
- (4) The positions of all other parties must be ascertained in advance by the requesting party and set forth in the request; and
- (5) Copies must be simultaneously served on all other parties (listed below), and that fact must be noted on the request.

Except under the most extreme conditions, no request for postponement will be granted during the three days immediately preceding the date of hearing.

FirstEnergy Corporation
Charles Cookson, Exec. Dir. of Labor Rel.
76 S Main St
Akron, OH 44308-1812

Allyson C. Werntz, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

David S. Farkas, Esq.
FirstEnergy Service Co.
76 Main Street
Akron, OH 44308-1812

Marianne Oliver, Esq.
Gilardi, Oliver & Lomupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

Brian W. Easley, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Avenue
Midland, PA 15059

Form NLRB-4668
(6-2014)

Procedures in NLRB Unfair Labor Practice Hearings

The attached complaint has scheduled a hearing that will be conducted by an administrative law judge (ALJ) of the National Labor Relations Board who will be an independent, impartial finder of facts and applicable law. **You may be represented at this hearing by an attorney or other representative.** If you are not currently represented by an attorney, and wish to have one represent you at the hearing, you should make such arrangements as soon as possible. A more complete description of the hearing process and the ALJ's role may be found at Sections 102.34, 102.35, and 102.45 of the Board's Rules and Regulations. The Board's Rules and regulations are available at the following link: www.nlr.gov/sites/default/files/attachments/basic-page/node-1717/rules_and_regs_part_102.pdf.

The NLRB allows you to file certain documents electronically and you are encouraged to do so because it ensures that your government resources are used efficiently. To e-file go to the NLRB's website at www.nlr.gov, click on "e-file documents," enter the 10-digit case number on the complaint (the first number if there is more than one), and follow the prompts. You will receive a confirmation number and an e-mail notification that the documents were successfully filed.

Although this matter is set for trial, this does not mean that this matter cannot be resolved through a settlement agreement. The NLRB recognizes that adjustments or settlements consistent with the policies of the National Labor Relations Act reduce government expenditures and promote amity in labor relations and encourages the parties to engage in settlement efforts.

I. BEFORE THE HEARING

The rules pertaining to the Board's pre-hearing procedures, including rules concerning filing an answer, requesting a postponement, filing other motions, and obtaining subpoenas to compel the attendance of witnesses and production of documents from other parties, may be found at Sections 102.20 through 102.32 of the Board's Rules and Regulations. In addition, you should be aware of the following:

- **Special Needs:** If you or any of the witnesses you wish to have testify at the hearing have special needs and require auxiliary aids to participate in the hearing, you should notify the Regional Director as soon as possible and request the necessary assistance. Assistance will be provided to persons who have handicaps falling within the provisions of Section 504 of the Rehabilitation Act of 1973, as amended, and 29 C.F.R. 100.603.
- **Pre-hearing Conference:** One or more weeks before the hearing, the ALJ may conduct a telephonic prehearing conference with the parties. During the conference, the ALJ will explore whether the case may be settled, discuss the issues to be litigated and any logistical issues related to the hearing, and attempt to resolve or narrow outstanding issues, such as disputes relating to subpoenaed witnesses and documents. This conference is usually not recorded, but during the hearing the ALJ or the parties sometimes refer to discussions at the pre-hearing conference. You do not have to wait until the prehearing conference to meet with the other parties to discuss settling this case or any other issues.

II. DURING THE HEARING

The rules pertaining to the Board's hearing procedures are found at Sections 102.34 through 102.43 of the Board's Rules and Regulations. Please note in particular the following:

- **Witnesses and Evidence:** At the hearing, you will have the right to call, examine, and cross-examine witnesses and to introduce into the record documents and other evidence.

Form NLRB-4668
(6-2014)

- **Exhibits:** Each exhibit offered in evidence must be provided in duplicate to the court reporter and a copy of each of each exhibit should be supplied to the ALJ and each party when the exhibit is offered in evidence. If a copy of any exhibit is not available when the original is received, it will be the responsibility of the party offering such exhibit to submit the copy to the ALJ before the close of hearing. If a copy is not submitted, and the filing has not been waived by the ALJ, any ruling receiving the exhibit may be rescinded and the exhibit rejected.
- **Transcripts:** An official court reporter will make the only official transcript of the proceedings, and all citations in briefs and arguments must refer to the official record. The Board will not certify any transcript other than the official transcript for use in any court litigation. Proposed corrections of the transcript should be submitted, either by way of stipulation or motion, to the ALJ for approval. Everything said at the hearing while the hearing is in session will be recorded by the official reporter unless the ALJ specifically directs off-the-record discussion. If any party wishes to make off-the-record statements, a request to go off the record should be directed to the ALJ.
- **Oral Argument:** You are entitled, on request, to a reasonable period of time at the close of the hearing for oral argument, which shall be included in the transcript of the hearing. Alternatively, the ALJ may ask for oral argument if, at the close of the hearing, if it is believed that such argument would be beneficial to the understanding of the contentions of the parties and the factual issues involved.
- **Date for Filing Post-Hearing Brief:** Before the hearing closes, you may request to file a written brief or proposed findings and conclusions, or both, with the ALJ. The ALJ has the discretion to grant this request and to will set a deadline for filing, up to 35 days.

III. AFTER THE HEARING

The Rules pertaining to filing post-hearing briefs and the procedures after the ALJ issues a decision are found at Sections 102.42 through 102.48 of the Board's Rules and Regulations. Please note in particular the following:

- **Extension of Time for Filing Brief with the ALJ:** If you need an extension of time to file a post-hearing brief, you must follow Section 102.42 of the Board's Rules and Regulations, which requires you to file a request with the appropriate chief or associate chief administrative law judge, depending on where the trial occurred. You must immediately serve a copy of any request for an extension of time on all other parties and furnish proof of that service with your request. You are encouraged to seek the agreement of the other parties and state their positions in your request.
- **ALJ's Decision:** In due course, the ALJ will prepare and file with the Board a decision in this matter. Upon receipt of this decision, the Board will enter an order transferring the case to the Board and specifying when exceptions are due to the ALJ's decision. The Board will serve copies of that order and the ALJ's decision on all parties.
- **Exceptions to the ALJ's Decision:** The procedure to be followed with respect to appealing all or any part of the ALJ's decision (by filing exceptions with the Board), submitting briefs, requests for oral argument before the Board, and related matters is set forth in the Board's Rules and Regulations, particularly in Section 102.46 and following sections. A summary of the more pertinent of these provisions will be provided to the parties with the order transferring the matter to the Board.

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION CORP.

Case 06-CA-163303

and

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO

AFFIDAVIT OF SERVICE OF: Order Rescheduling Hearing dated July 19, 2016.

I, the undersigned employee of the National Labor Relations Board, being duly sworn, say that on July 19, 2016, I served the above-entitled document(s) by regular mail upon the following persons, addressed to them at the following addresses:

FirstEnergy Generation Corp.
Rose Gobell, Human Resource Director
76 Main Street
Akron, OH 44308-1812

David S. Farkas, Esq.
FirstEnergy Generation Corp.
76 S Main St 15th Fl
Akron, OH 44308

Brian W. Easley, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

Allyson C. Werntz, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

Marianne Oliver, Esq.
Gilardi, Oliver & Lomupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Ave
Midland, PA 15059-1512

Beverly Berger
Designated Agent of NLRB

Name

July 19, 2016

Date

Signature

Beverly Berger

107

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION CORP.

and

Case 06-CA-163303

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO

ORDER RESCHEDULING HEARING

An Order for Complaint and Notice of Hearing issued on May 27, 2016, scheduling a hearing in this matter for August 29, 2016. On June 21, 2016, Respondent requested a postponement due to the unavailability of a witness. Thereafter, the parties were consulted regarding their availability on various dates. Counsel for the Charging Party does not object and is available on the October 5, 2016. Accordingly,

IT IS HEREBY ORDERED that the hearing in the above-entitled matter is rescheduled from August 29, 2016 at 11:00 a.m., to 10:00 a.m., on October 5, 2016 at the National Labor Relations Board, Region 6, William S. Moorhead Federal Building, 1000 Liberty Avenue, Room 904, Pittsburgh, Pennsylvania. The hearing will continue on consecutive days until concluded.

Dated: July 19, 2016



NANCY WILSON
REGIONAL DIRECTOR
NATIONAL LABOR RELATIONS BOARD
REGION 06
1000 Liberty Ave Rm 904
Pittsburgh, PA 15222-4111



UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION SIX

FIRSTENERGY GENERATION CORP.

and

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS LOCAL 272,
AFL-CIO

Case No.: 06-CA-163303

RESPONDENT'S REQUEST FOR POSTPONEMENT OF HEARING DATE

Respondent FIRSTENERGY GENERATION CORP. ("Respondent") respectfully requests a brief postponement of the hearing date in the above-captioned unfair labor practice case, pursuant to Section 102.16 of the Rules and Regulations of the National Labor Relations Board ("NLRB" or "Board"), and in support states as follows:

1. On May 27, 2016, the NLRB's Acting Regional Director issued the complaint in the above-referenced unfair labor practice case, scheduling a hearing for August 29, 2016 in Pittsburgh, Pennsylvania. Counsel for Respondent was not consulted regarding the hearing date prior to the issuance of the complaint.
2. One of Respondent's principal witnesses is unavailable to testify on August 29-30, 2016. Conducting a hearing without one of Respondent's principal witnesses, would cause undue hardship to Respondent. Further, conducting the hearing without the testimony of one of the Respondent's principal witnesses would unfairly prejudice the Respondent, preventing it from presenting evidence in support of its Answer and Affirmative Defenses, filed with the NLRB on June 9, 2016.
3. Respondent is willing to re-schedule the hearing in this matter for the earliest practicable date. Having checked with the Respondent's principal witnesses, Respondent

proposes August 31, 2016 as an alternative date for the hearing, postponement of two business days.

4. This request for postponement is being requested more than twenty-one (21) days prior to the scheduled hearing date. Moreover, this request is submitted for the legitimate reasons set forth herein and not for purposes of delay.

5. Counsel for Respondent contacted Counsel for the General Counsel, who indicated that she did not believe the Region would have any objection to a brief postponement. Respondent's counsel contacted counsel for the Charging Party by e-mail regarding the requested postponement but has not yet received any response.

WHEREFORE, for the foregoing legitimate reasons, Respondent respectfully requests that the unfair labor practice hearing in this case be postponed until August 31, 2016.

Dated: June 21, 2016

Respectfully submitted,

/s Brian West Easley
David S. Farkas
FIRSTENERGY CORP.
76 S. Main Street
Akron, OH 44308
Telephone: (330) 384-4844
Facsimile: (330) 384-3875

Brian West Easley
JONES DAY
77 West Wacker Dr.
Suite 3500
Chicago, IL 60601-1692
Telephone: (312) 782-3939
Facsimile: (312) 782-8585

ATTORNEYS FOR RESPONDENT
FIRSTENERGY GENERATION CORP.

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing Request for Extension of Time was mailed to the following:

Suzanne Bernett, Acting Regional Director
National Labor Relations Board, Region 6
1000 Liberty Avenue, Room 904
Pittsburgh, PA 15222

Marianne Oliver, Esq.
Gilardi, Oliver & Lamupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1512

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Ave.
Midland, PA 15059-1512

this 21st day of June, 2016.

/s Brian West Easley

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION SIX

FIRSTENERGY GENERATION CORP.

and

Case No.: 06-CA-163303

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL 272,
AFL-CIO

ANSWER AND AFFIRMATIVE DEFENSES OF
RESPONDENT FIRSTENERGY CORP.

Respondent FIRSTENERGY CORP. ("Respondent"), files this Answer and Affirmative Defenses to the General Counsel's Complaint and Notice of Hearing ("Complaint"), pursuant to Rules 102.20 and 102.21 of the Rules and Regulations of the National Labor Relations Board ("NLRB"), and in support states as follows:

ANSWER

1. (a) Respondent admits the allegations set forth in paragraph 1(a) of the Complaint.
- (b) Respondent admits the allegations set forth in paragraph 1(b) of the Complaint.
2. Respondent admits the allegations set forth in paragraph 2 of the Complaint.
3. (a) Respondent admits the allegations set forth in paragraph 3(a) of the Complaint.
- (b) Respondent admits the allegations set forth in paragraph 3(b) of the Complaint.
4. Respondent admits the allegation set forth in paragraph 4 of the Complaint.
5. Respondent admits the allegations set forth in paragraph 5 of the Complaint.

ANSWER AND AFFIRMATIVE DEFENSES

PAGE 1

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6. Respondent only admits that, during all times material to the allegations in the Complaint, the following individuals were supervisors and/or agents within the meaning of the National Labor Relations Act ("NLRA" or "Act"):

Chuck Cookson – Executive Director of Labor Relations.
Antony Gianatasio – Labor Relations Representative
James Graf – BMP Plant Director

Each and every other allegation set forth in this paragraph which is not specifically admitted is, accordingly, denied.

7. Respondent admits only that Respondent recognizes the International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO ("Union") as the exclusive collective bargaining representative for employees in the appropriate bargaining unit certified by the NLRB in Case No. 6-RC-7962 and that such unit is composed of all production and maintenance employees, including Control Room Operators, employees in the Stores, Electrical, Maintenance, Operations, I&T, and Yard Departments at the Bruce Mansfield Plant, excluding technicians, office clerical employees and guards, other professional employees and supervisors as defined in the Act. Each and every other allegation set forth in this paragraph which is not specifically admitted is, accordingly, denied.

8. Respondent admits the allegations contained in Paragraph 8 of the Complaint.

9. Respondent admits the allegations contained in Paragraph 9 of the Complaint

10. Respondent admits the allegation set forth in paragraph 10 of the Complaint.

11. Respondent only that, in a letter dated October 27, 2015, the Respondent informed the Union that, in light of the impasse in collective bargaining between the parties, Respondent planned to implement certain terms and conditions of employment contained in its Second Comprehensive Offer of Settlement effective October 27, 2015 and that the letter speaks

for itself. Each and every other allegation set forth in this paragraph which is not specifically admitted is, accordingly, denied.

12. Respondent denies the allegations set forth in paragraph 12 of the Complaint.

13. Paragraph 13 of the Complaint contains legal conclusions to which no response is required. To the extent a response is required, Respondent denies the allegations in this paragraph.

14. (a) Respondent denies the allegations set forth in paragraph 14(a) of the Complaint.

(b) Paragraph 14(b) of the Complaint contains legal conclusions to which no response is required. To the extent a response is required, Respondent denies the allegations in this paragraph.

15. Respondent denies the allegations set forth in paragraph 15 of the Complaint.

16. Respondent denies the allegations set forth in paragraph 16 of the Complaint.

AFFIRMATIVE DEFENSES

First Affirmative Defense

To the extent that any of the allegations set forth in the Complaint are based upon acts or occurrences which were not within the scope of a timely unfair labor practice charge filed by the Union, the NLRB lacks jurisdiction over any alleged violations of the NLRA based upon such allegations.

Second Affirmative Defense

To the extent that any of the allegations set forth in the Complaint are based upon acts or occurrences which were not within the scope of a timely unfair labor practice charge filed by the Union, these allegations are untimely and therefore barred by Section 10(b) of the Act.

ANSWER AND AFFIRMATIVE DEFENSES

PAGE 3

Appendix000431

Third Affirmative Defense

The unfair labor practice allegations in the Complaint are barred, in whole or in part, because the parties reached a *bona fide* impasse in negotiations that privileged the Respondent to implement portions of its Second Comprehensive Offer of Settlement.

Fourth Affirmative Defense

The unfair labor practice allegations in the Complaint are barred, in whole or in part, because the Union failed or refused to engage in good faith bargaining with Respondent in violation of Section 8(b)(3) of the Act.

Fifth Affirmative Defense

The unfair labor practice allegations in the Complaint are barred, in whole or in part, by the Union's failure or refusal to meet at reasonable times and confer in good faith in violation of Section 8(d) of the Act.

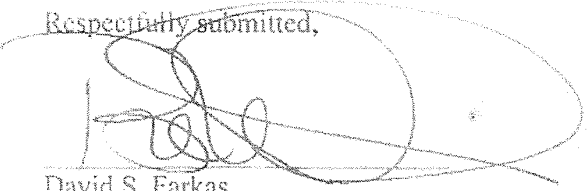
Sixth Affirmative Defense

The unfair labor practice charge in this case is barred, in whole or in part, because any alleged actions or omissions by Respondents were justified by applicable law.

WHEREFORE, having fully answered the Complaint, and having denied any and all alleged unlawful conduct, Respondent respectfully requests that the Complaint be dismissed in its entirety; that the General Counsel and Charging Party take nothing by way of the Complaint; and that the NLRB award Respondents all other appropriate relief.

Dated: June 9 2016

Respectfully submitted,



David S. Farkas
FIRSTENERGY
76 S. Main Street
Akron, OH 44308
Telephone: (330) 384-4844
Facsimile: (330) 384-3875

Brian West Easley
Allyson Wernitz
JONES DAY
77 West Wacker Dr.
Suite 3500
Chicago, IL 60601-1692
Telephone: (312) 782-3939
Facsimile: (312) 782-8585

ATTORNEYS FOR RESPONDENT
FIRSTENERGY GENERATION CORP.

CERTIFICATE OF SERVICE

I hereby certify that, on this 9th day of June, 2016, I electronically filed the foregoing Answer and Affirmative Defenses of Respondent to the Complaint and Notice of Hearing. In addition, a copy of the document was sent via regular mail to the following:

Marianne Oliver, Esq.
Gilardi, Oliver & Lamupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1512

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Ave.
Midland, PA 15059-1512

Brian W. Engley/ACW

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION CORP.

and

Case 06-CA-163303

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO

AFFIDAVIT OF SERVICE OF: Complaint and Notice of Hearing (with forms NLRB-4338 and NLRB-4668 attached)

I, the undersigned employee of the National Labor Relations Board, being duly sworn, say that on May 27, 2016, I served the above-entitled document(s) by **certified or regular mail**, as noted below, upon the following persons, addressed to them at the following addresses:

Rose Gobell, Human Resource Director
FirstEnergy Generation Corp.
76 Main Street
Akron, OH 44308-1812

**CERTIFIED MAIL, RETURN RECEIPT
REQUESTED**

David S. Farkas, Esq.
FirstEnergy Generation Corp.
76 S Main St 15th Floor
Akron, OH 44308

REGULAR MAIL

Brian West Easley, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1701

REGULAR MAIL

Allyson C. Werntz, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1692

REGULAR MAIL

105

Marianne Oliver , Esq.
Gilardi, Oliver & Lomupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

REGULAR MAIL

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Ave.
Midland, PA 15059-1512

CERTIFIED MAIL

May 27, 2016

Date

Jacquetta M. Keeton,
Designated Agent of NLRB

Name

/s/ Jacquetta M. Keeton

Signature

FORM NLRB 4338
(6-90)

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com

OFFICIAL USE

9420 2269 1000 0706 5102

Certified Mail Fee \$
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$
☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$

Postage \$
Total Post \$

Sent To FirstEnergy Generation Corp.
Rose Gobell, Human Resource Director
76 Main Street
Akron, OH 44308-1812

City, State, Zip

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

06-CA-163303
Postmark Here Cpt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

FirstEnergy Generation Corp.
Rose Gobell, Human Resource Director
76 Main Street
Akron, OH 44308-1812

2. Article (Tra) 7015 3010 0001 6922 0768

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature ☒ X ☐ Agent ☐ Addressee

B. Received by (Printed Name) DARYL DUFF C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

3010 0001 6922 0775

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OFFICIAL USE

9420 2269 1000 0706 5102

Certified Mail Fee \$
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$
☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$

Postage \$
Total Post \$

Sent To International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO
838A Midland Ave
Akron, OH 44308-1512

City, State, Zip

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

06-CA-163303
Postmark Here Cpt

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION 6

FIRSTENERGY GENERATION CORP.

and

Case 06-CA-163303

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO

COMPLAINT AND NOTICE OF HEARING

This Complaint and Notice of Hearing is based on a charge filed by International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO (Charging Party or Union). It is issued pursuant to Section 10(b) of the National Labor Relations Act (the Act), 29 U.S.C. § 151 et seq., and Section 102.15 of the Rules and Regulations of the National Labor Relations Board (the Board) and alleges that FirstEnergy Generation Corp. (Respondent) has violated the Act as described below:

1. (a) The charge in this proceeding was filed by the Charging Party on November 4, 2015 and a copy was served on Respondent by U.S. mail on November 4, 2015.
(b) The first amended charge in this proceeding was filed by the Charging Party on February 29, 2016, and a copy was served on Respondent by U.S. mail on February 29, 2016.
2. At all material times, Respondent has been a corporation with an office and place of business in Akron, Ohio, and has been engaged in the operation of electric generation plants in several states, including the Bruce Mansfield plant located in Shippingport, Pennsylvania, the only facility involved herein and herein called BMP or Respondent's facility.



3. (a) In conducting its operations during the 12-month period ending October 31, 2015, Respondent derived gross revenues in excess of \$250,000.

(b) During the 12-month period ending October 31, 2015, Respondent in conducting its operations described above in paragraph 2, purchased and received at its Shippingport, Pennsylvania, facility goods valued in excess of \$50,000 directly from points outside the Commonwealth of Pennsylvania.

4. At all material times, Respondent has been an employer engaged in commerce within the meaning of Section 2(2), (6), and (7) of the Act.

5. At all material times, the Charging Party has been a labor organization within the meaning of Section 2(5) of the Act.

6. At all material times, the following individuals held the positions set forth opposite their respective names and have been supervisors of Respondent within the meaning of Section 2(11) of the Act and/or agents of Respondent within the meaning of Section 2(13) of the Act:

Charles Cookson	-	Executive Director of Labor Relations
Anthony Gianatasio	-	Labor Relations Representative
James Graf	-	BMP Plant Director

7. The following employees of Respondent (the Unit) constitute a unit appropriate for the purposes of collective bargaining within the meaning of Section 9(b) of the Act:

All production and maintenance employees, including control room operators, employees in the stores, electrical, maintenance, operations, results, and yard departments, employed at Respondent's Shippingport, Pennsylvania, facility; excluding technicians, office clerical employees and guards, professional employees and supervisors as defined in the Act.

8. For many years and at all material times, Respondent has recognized the Union as the exclusive collective-bargaining representative of the Unit. This recognition has been

embodied in successive collective-bargaining agreements, the most recent of which was effective from December 5, 2009, to February 15, 2013, as extended by agreement of the parties until February 15, 2014.

9. At all material times, based on Section 9(a) of the Act, the Union has been the exclusive collective-bargaining representative of the Unit.

10. At various times and intermittently during the period from December 19, 2013 to September 18, 2015, Respondent and the Union met for the purpose of negotiating a successor collective-bargaining agreement to the agreement described above in paragraph 8.

11. On October 27, 2015, Respondent, orally and by letter, informed the Union that Respondent would partially implement its Comprehensive Proposal Number Two.

12. On October 27, 2015 Respondent failed to implement the wage adjustments and shift differential proposals contained in its Comprehensive Proposal Number Two notwithstanding that it implemented the remaining terms of that proposal.

13. The subject set forth above in paragraph 12 relates to wages, hours, and other terms and conditions of employment of the Unit and are mandatory subjects for the purposes of collective bargaining.

14. (a) Since October 27, 2015, Respondent conditioned implementation of its wage adjustments and shift differential proposals upon ratification of the contract by the Unit.

(b) The condition of ratification by the Unit is not a mandatory subject for the purposes of collective bargaining.

15. By the conduct described above in paragraphs 12 and 14, Respondent has been failing and refusing to bargain collectively and in good faith with the exclusive collective-bargaining representative of its employees in violation of Section 8(a)(1) and (5) of the Act.

16. The unfair labor practices of Respondent described above affect commerce within the meaning of Section 2(6) and (7) of the Act.

ANSWER REQUIREMENT

Respondent is notified that, pursuant to Sections 102.20 and 102.21 of the Board's Rules and Regulations, it must file an answer to the complaint. The answer must be **received by this office on or before June 10, 2016, or postmarked on or before June 9, 2016.** Respondent should file an original and four copies of the answer with this office and serve a copy of the answer on each of the other parties.

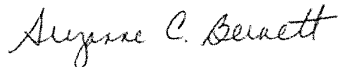
An answer may also be filed electronically through the Agency's website. To file electronically, go to www.nlr.gov, click on **E-File Documents**, enter the NLRB Case Number, and follow the detailed instructions. The responsibility for the receipt and usability of the answer rests exclusively upon the sender. Unless notification on the Agency's website informs users that the Agency's E-Filing system is officially determined to be in technical failure because it is unable to receive documents for a continuous period of more than 2 hours after 12:00 noon (Eastern Time) on the due date for filing, a failure to timely file the answer will not be excused on the basis that the transmission could not be accomplished because the Agency's website was off-line or unavailable for some other reason. The Board's Rules and Regulations require that an answer be signed by counsel or non-attorney representative for represented parties or by the party if not represented. See Section 102.21. If the answer being filed electronically is a pdf document containing the required signature, no paper copies of the answer need to be transmitted to the Regional Office. However, if the electronic version of an answer to a complaint is not a

pdf file containing the required signature, then the E-filing rules require that such answer containing the required signature continue to be submitted to the Regional Office by traditional means within three (3) business days after the date of electronic filing. Service of the answer on each of the other parties must still be accomplished by means allowed under the Board's Rules and Regulations. The answer may not be filed by facsimile transmission. If no answer is filed, or if an answer is filed untimely, the Board may find, pursuant to a Motion for Default Judgment, that the allegations in the complaint are true.

NOTICE OF HEARING

PLEASE TAKE NOTICE THAT on August 29, 2016, at 11:00 a.m. at the National Labor Relations Board, Region 6 Offices, William S. Moorhead Federal Building, 1000 Liberty Avenue, Room 904, Pittsburgh, PA, and on consecutive days thereafter until concluded, a hearing will be conducted before an administrative law judge of the National Labor Relations Board. At the hearing, Respondent and any other party to this proceeding have the right to appear and present testimony regarding the allegations in this complaint. The procedures to be followed at the hearing are described in the attached Form NLRB-4668. The procedure to request a postponement of the hearing is described in the attached Form NLRB-4338.

Dated: May 27, 2016



Suzanne C. Bennett
Acting Regional Director
National Labor Relations Board
Region 06
1000 Liberty Ave Rm 904
Pittsburgh, PA 15222-4111

Attachments

Form NLRB-4668
(6-2014)

UNITED STATES GOVERNMENT
NATIONAL LABOR RELATIONS BOARD
NOTICE

Case 06-CA-163303

The issuance of the notice of formal hearing in this case does not mean that the matter cannot be disposed of by agreement of the parties. On the contrary, it is the policy of this office to encourage voluntary adjustments. The examiner or attorney assigned to the case will be pleased to receive and to act promptly upon your suggestions or comments to this end.

An agreement between the parties, approved by the Regional Director, would serve to cancel the hearing. However, unless otherwise specifically ordered, the hearing will be held at the date, hour, and place indicated. Postponements *will not be granted* unless good and sufficient grounds are shown *and* the following requirements are met:

- (1) The request must be in writing. An original and two copies must be filed with the Regional Director when appropriate under 29 CFR 102.16(a) or with the Division of Judges when appropriate under 29 CFR 102.16(b).
- (2) Grounds must be set forth in *detail*;
- (3) Alternative dates for any rescheduled hearing must be given;
- (4) The positions of all other parties must be ascertained in advance by the requesting party and set forth in the request; and
- (5) Copies must be simultaneously served on all other parties (listed below), and that fact must be noted on the request.

Except under the most extreme conditions, no request for postponement will be granted during the three days immediately preceding the date of hearing.

FirstEnergy Generation Corp.
Rose Gobell
Human Resource Director
76 Main Street
Akron, OH 44308-1812

David S. Farkas, Esq.
FirstEnergy Generation Corp.
76 S Main St 15th Floor
Akron, OH 44308

Brian West Easley, Esq.
Jones Day
77 West Wacker Drive
Chicago, IL 60601-1701
Allyson C. Werntz, Esq.
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77 West Wacker Drive
Chicago, IL 60601-1692

International Brotherhood of Electrical
Workers, Local Union No. 272, AFL-CIO
838A Midland Ave.
Midland, PA 15059-1512
Marianne Oliver, Esq.
Gilardi, Oliver & Lomupo, P.A.
223 Fourth Avenue, 10th Floor
The Benedum Trees Building
Pittsburgh, PA 15222-1717

(OVER)

Appendix000443

Form NLRB-4668
(6-2014)

Procedures in NLRB Unfair Labor Practice Hearings

The attached complaint has scheduled a hearing that will be conducted by an administrative law judge (ALJ) of the National Labor Relations Board who will be an independent, impartial finder of facts and applicable law. **You may be represented at this hearing by an attorney or other representative.** If you are not currently represented by an attorney, and wish to have one represent you at the hearing, you should make such arrangements as soon as possible. A more complete description of the hearing process and the ALJ's role may be found at Sections 102.34, 102.35, and 102.45 of the Board's Rules and Regulations. The Board's Rules and regulations are available at the following link: www.nlr.gov/sites/default/files/attachments/basic-page/node-1717/rules_and_regs_part_102.pdf.

The NLRB allows you to file certain documents electronically and you are encouraged to do so because it ensures that your government resources are used efficiently. To e-file go to the NLRB's website at www.nlr.gov, click on "e-file documents," enter the 10-digit case number on the complaint (the first number if there is more than one), and follow the prompts. You will receive a confirmation number and an e-mail notification that the documents were successfully filed.

Although this matter is set for trial, this does not mean that this matter cannot be resolved through a settlement agreement. The NLRB recognizes that adjustments or settlements consistent with the policies of the National Labor Relations Act reduce government expenditures and promote amity in labor relations and encourages the parties to engage in settlement efforts.

I. BEFORE THE HEARING

The rules pertaining to the Board's pre-hearing procedures, including rules concerning filing an answer, requesting a postponement, filing other motions, and obtaining subpoenas to compel the attendance of witnesses and production of documents from other parties, may be found at Sections 102.20 through 102.32 of the Board's Rules and Regulations. In addition, you should be aware of the following:

- **Special Needs:** If you or any of the witnesses you wish to have testify at the hearing have special needs and require auxiliary aids to participate in the hearing, you should notify the Regional Director as soon as possible and request the necessary assistance. Assistance will be provided to persons who have handicaps falling within the provisions of Section 504 of the Rehabilitation Act of 1973, as amended, and 29 C.F.R. 100.603.
- **Pre-hearing Conference:** One or more weeks before the hearing, the ALJ may conduct a telephonic prehearing conference with the parties. During the conference, the ALJ will explore whether the case may be settled, discuss the issues to be litigated and any logistical issues related to the hearing, and attempt to resolve or narrow outstanding issues, such as disputes relating to subpoenaed witnesses and documents. This conference is usually not recorded, but during the hearing the ALJ or the parties sometimes refer to discussions at the pre-hearing conference. You do not have to wait until the prehearing conference to meet with the other parties to discuss settling this case or any other issues.

II. DURING THE HEARING

The rules pertaining to the Board's hearing procedures are found at Sections 102.34 through 102.43 of the Board's Rules and Regulations. Please note in particular the following:

- **Witnesses and Evidence:** At the hearing, you will have the right to call, examine, and cross-examine witnesses and to introduce into the record documents and other evidence.
- **Exhibits:** Each exhibit offered in evidence must be provided in duplicate to the court reporter and a copy of each of each exhibit should be supplied to the ALJ and each party when the exhibit is offered

(OVER)

Appendix000444

Form NLRB-4668
(6-2014)

in evidence. If a copy of any exhibit is not available when the original is received, it will be the responsibility of the party offering such exhibit to submit the copy to the ALJ before the close of hearing. If a copy is not submitted, and the filing has not been waived by the ALJ, any ruling receiving the exhibit may be rescinded and the exhibit rejected.

- **Transcripts:** An official court reporter will make the only official transcript of the proceedings, and all citations in briefs and arguments must refer to the official record. The Board will not certify any transcript other than the official transcript for use in any court litigation. Proposed corrections of the transcript should be submitted, either by way of stipulation or motion, to the ALJ for approval. Everything said at the hearing while the hearing is in session will be recorded by the official reporter unless the ALJ specifically directs off-the-record discussion. If any party wishes to make off-the-record statements, a request to go off the record should be directed to the ALJ.
- **Oral Argument:** You are entitled, on request, to a reasonable period of time at the close of the hearing for oral argument, which shall be included in the transcript of the hearing. Alternatively, the ALJ may ask for oral argument if, at the close of the hearing, if it is believed that such argument would be beneficial to the understanding of the contentions of the parties and the factual issues involved.
- **Date for Filing Post-Hearing Brief:** Before the hearing closes, you may request to file a written brief or proposed findings and conclusions, or both, with the ALJ. The ALJ has the discretion to grant this request and to will set a deadline for filing, up to 35 days.

III. AFTER THE HEARING

The Rules pertaining to filing post-hearing briefs and the procedures after the ALJ issues a decision are found at Sections 102.42 through 102.48 of the Board's Rules and Regulations. Please note in particular the following:

- **Extension of Time for Filing Brief with the ALJ:** If you need an extension of time to file a post-hearing brief, you must follow Section 102.42 of the Board's Rules and Regulations, which requires you to file a request with the appropriate chief or associate chief administrative law judge, depending on where the trial occurred. You must immediately serve a copy of any request for an extension of time on all other parties and furnish proof of that service with your request. You are encouraged to seek the agreement of the other parties and state their positions in your request.
- **ALJ's Decision:** In due course, the ALJ will prepare and file with the Board a decision in this matter. Upon receipt of this decision, the Board will enter an order transferring the case to the Board and specifying when exceptions are due to the ALJ's decision. The Board will serve copies of that order and the ALJ's decision on all parties.
- **Exceptions to the ALJ's Decision:** The procedure to be followed with respect to appealing all or any part of the ALJ's decision (by filing exceptions with the Board), submitting briefs, requests for oral argument before the Board, and related matters is set forth in the Board's Rules and Regulations, particularly in Section 102.46 and following sections. A summary of the more pertinent of these provisions will be provided to the parties with the order transferring the matter to the Board.

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD

FIRSTENERGY CORPORATION

Charged Party

and

**INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO**

Charging Party

Case 06-CA-170901

AFFIDAVIT OF SERVICE OF CHARGE AGAINST EMPLOYER

I, the undersigned employee of the National Labor Relations Board, state under oath that on March 3, 2016, I served the above-entitled document(s) by post-paid regular mail upon the following persons, addressed to them at the following addresses:

FirstEnergy Corporation
Charles Cookson, Human Resource Director
76 S Main St
Akron, OH 44308-1812

March 3, 2016

Date

Nancy Maata

Charlene M. Prosser, Designated Agent of
NLRB

Name

Charlene M. Prosser
Signature

Mar 02 2016 02:24PM Gilardi Oliver & Mupo 4123919780

page 2

INTERNET
FORM NLRB-501
(11-K)UNITED STATES OF AMERICA
NATIONAL LABOR RELATIONS BOARD
CHARGE AGAINST EMPLOYER

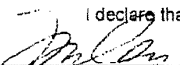
FORM EXEMPT UNDER 44 U.S.C. 3512

DO NOT WRITE IN THIS SPACE

Case	Date Filed
06-CA-170901	3-2-16

INSTRUCTIONS:

File an original and 4 copies of this charge with NLRB Regional Director for the region in which the alleged unfair labor practice occurred or is occurring.

1. EMPLOYER AGAINST WHOM CHARGE IS BROUGHT			
a. Name of Employer FirstEnergy Corp.		b. Number of Workers Employed 300	
c. Address (street, city, State, ZIP, Code) 76 S. Main Street Akron OH 44308		d. Employer Representative Chuck Cookson, Director	
f. Type of Establishment (factory, mine, wholesaler, etc.) utility		g. Identify Principal Product or Service electricity services	
h. The above-named employer has engaged in and is engaging in unfair labor practices within the meaning of Section 8(a), subsections (1) and (W) subsections (5) of the National Labor Relations Act, and these unfair labor practices are unfair practices affecting commerce within the meaning of the Act.			
2. Basis of the Charge (set forth a clear and concise statement of the facts constituting the alleged unfair labor practices.) <p>Since on or about February 1, 2016, and at all times thereafter, the above-named employer, by its officers, agents and representatives has, by failing to provide information and unilaterally changing the status quo regarding notice to and bargaining with the Union concerning contracting out has failed to bargain collectively and in good faith with International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO, a labor organization, designated or selected by a majority of the employees of said employer in an appropriate unit for the purposes of collective bargaining in respect to rates of pay, wages, hours of employment and other conditions of employment.</p> <p>By the above and other acts, the above-named employer has interfered with, restrained, and coerced employees in the exercise of the rights guaranteed in Section 7 of the Act.</p>			
3. Full name of party filing charge (if labor organization, give full name, including local name and number) International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO			
4a. Address (street and number, city, State, and ZIP Code) 838A Midland Avenue Midland PA 15059		4b. Telephone No. 724-643-4210 Fax No. 724-643-8720	
5. Full name of national or international labor organization of which it is an affiliate or constituent unit (to be Red In when charge is filed by a labor organization) International Brotherhood of Electrical Workers, AFL-CIO			
6. DECLARATION I declare that I have read the above charge and that the statements are true to the best of my knowledge and belief.			
By  (Signature of representative or person making charge)		Attorney Title, if any	
Address 223 Fourth Avenue, 10th Floor, Pittsburgh, PA 15222		Fax No. 412-232-3084 412-391-9770 (Telephone No.)	
		March 2, 2016 Date	

WILLFUL FALSE STATEMENTS ON THIS CHARGE CAN BE PUNISHED BY FINE AND IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001)

Appendix000447

RECEIVED
NLRB
REGION 6

2016 MAR -2 PM 2:47

PITTSBURGH, PA

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD

FIRSTENERGY GENERATION CORP.

Charged Party

and

**INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION NO.
272, AFL-CIO**

Charging Party

Case 06-CA-163303

AFFIDAVIT OF SERVICE OF FIRST AMENDED CHARGE AGAINST EMPLOYER

I, the undersigned employee of the National Labor Relations Board, being duly sworn, say that on February 29, 2016, I served the above-entitled document(s) by regular mail upon the following persons, addressed to them at the following addresses:

FirstEnergy Generation Corp.
Rose Gobell, Human Resource Director
76 Main Street
Akron, OH 44308-1812

February 29, 2016

Date

Charlene M. Prosser, Designated Agent of
NLRB

Name

/s/ Charlene M. Prosser

Signature

MLR

UNITED STATES OF AMERICA
NATIONAL LABOR RELATIONS BOARD

DO NOT WRITE IN THIS SPACE

Da - Fried

FIRST AMENDED CHARGE AGAINST EMPLOYER

INSTRUCTIONS:

06-CA-11 305

2-29-16

File in origin: Doc. no. ge. vult. NL. B. Re. or. 1. Br. ... aged until ... Long ... : of ... or ... occurring ...

a Name of Employer

FirstEnergy Generation Corp

NC
1643-5000
No

Address (street, city, state, ZIP code)
76 Main Street Akron OH 44308-812

e. Employee Representative
Rose Cobell
Human Resource Director

Fax No
E-mail

Location: Maryland State

St. p. angp. m. 2A

Type of Establishment: History: Use of Home: Principal Products or
 Use:

2004

electric services

150

[illegible]

Since about October 27, 2015, the Employer has failed to bargain collectively and in good faith with International Brotherhood of Electrical Workers, Local Union No. 17, AFL-CIO, a labor organization by implementing terms and conditions of employment prior to reaching a valid impasse and by insisting on a proposal to alter the bargaining unit implementing terms a condition that are an encompass its bargaining proposals; refusal to implement a wage increase and conditioning the wage increase on ratification and by dealing directly with employees.

International Brotherhood of Electrical Workers Local Union No. 571 JK

Address 40- and 41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-

10
(724)643-4210
10

24643-8720

5. Full name of the person, position, address, city, state, zip, and country: _____

DECLARATION

I declare that I have read the above charge and that the statements are true to the best of my knowledge and belief.

24; 43-1211

By Ms. [Signature]
 and of representation or person in skin for [Signature] name and title.

311 312 313 No

Addr 8387 Midland Ave Midland PA 16770
 (505)- 11

Ne
(724)643-8 20
Mail

WILLFUL FALSE STATEMENTS ON THIS CHARGE CAN BE PUNISHED BY FINE AND IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001)
 PRIVACY ACT STATEMENT

[illegible]

Appendix000450

RECEIVED
NLRB
REGION 6
2016 FEB 29 AM 7:40
PITTSBURGH, PA

UNITED STATES OF AMERICA
BEFORE THE NATIONAL LABOR RELATIONS BOARD

**FIRSTENERGY GENERATION
CORPORATION**

Charged Party

and

**INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION 272,
AFL-CIO**

Charging Party

Case 06-CA-163303

AFFIDAVIT OF SERVICE OF CHARGE AGAINST EMPLOYER

I, the undersigned employee of the National Labor Relations Board, state under oath that on November 4, 2015, I served the above-entitled document(s) by post-paid regular mail upon the following persons, addressed to them at the following addresses:

Rose Gobell, Human Resource Director
FirstEnergy Corp.
76 S Main St
Akron, OH 44308-1812

November 4, 2015

Date

Charlene M. Prosser, Designated Agent of
NLRB

Name

/s/ Charlene M. Prosser

Signature

INTERNET
FORM NLRB-501
(11-K)UNITED STATES OF AMERICA
NATIONAL LABOR RELATIONS BOARD
CHARGE AGAINST EMPLOYER

FORM EXEMPT UNDER 44 U.S.C. 3512

DO NOT WRITE IN THIS SPACE

Case	Date Filed
06-CA-163303	11-4-15

INSTRUCTIONS:

File an original and 4 copies of this charge with NLRB Regional Director for the region in which the alleged unfair labor practice occurred or is occurring.

1. EMPLOYER AGAINST WHOM CHARGE IS BROUGHT	
a. Name of Employer FirstEnergy Generation Corp.	b. Number of Workers Employed 400
c. Address (street, city, State, ZIP, Code) 76 S. Main Street Akron OH 44308 Jobsite: Shippingport PA	d. Employer Representative Rose Gobell, Human Resource Director
	e. Telephone No. 724-643-5000
	Fax No.
f. Type of Establishment (factory, mine, wholesaler, etc.) utility	g. Identify Principal Product or Service electricity services
h. The above-named employer has engaged in and is engaging in unfair labor practices within the meaning of Section 8(a), subsections (1) and (W) of the National Labor Relations Act, and these unfair labor practices are unfair practices affecting commerce within the meaning of the Act.	
2. Basis of the Charge (set forth a clear and concise statement of the facts constituting the alleged unfair labor practices.)	
<p>Since on or about October 27, 2015, and at all times thereafter, the above-named employer, by its officers, agents and representatives, has failed and refused to bargain collectively and in good faith with International Brotherhood of Electrical Workers, Local Union No. 272, a labor organization, designated or selected by a majority of the employees of said employer in an appropriate unit for the purposes of collective bargaining in respect to rates of pay, wages, hours of employment and other conditions of employment.</p> <p>The Union also seeks injunctive relief under Section 10(j) of the Act.</p>	
By the above and other acts, the above-named employer has interfered with, restrained, and coerced employees in the exercise of the rights guaranteed in Section 7 of the Act.	
3. Full name of party filing charge (if labor organization, give full name, including local name and number)	
International Brotherhood of Electrical Workers, Local Union No. 272, AFL-CIO	
4a. Address (street and number, city, State, and ZIP Code)	4b. Telephone No.
838A Midland Avenue Midland PA 15059	724-643-4210
	Fax No. 724-643-8720
5. Full name of national or international labor organization of which it is an affiliate or constituent unit (to be Red In when charge is filed by a labor organization)	
International Brotherhood of Electrical Workers, AFL-CIO	
6. DECLARATION	
I declare that I have read the above charge and that the statements are true to the best of my knowledge and belief.	
By <u><i>Macdon</i></u>	Attorney
(Signature of representative or person making charge)	Title, if any
Address 223 Fourth Avenue, 10th Floor, Pittsburgh, PA 15222	Fax No. 412-232-3084
	412-391-9770
	November 2, 2015
	(Telephone No.) Date

WILLFUL FALSE STATEMENTS ON THIS CHARGE CAN BE PUNISHED BY FINE AND IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001)

Appendix000453

Bruce Mansfield Plant Outage

M116

M116 Outage Day	10	Percent Complete	16%	Outage Days Remaining	54
Next Milestone	Target Time	Days Away	Hours Away		
Truck Arrives for IP Rotor Ship to GE Schenectady Shop	3/19/16 13:00	-0.8	-19		
Hit Skid Vacuum Decay Test Start	3/20/16 13:00	0.2	5		
Truck Arrives at GE Schenectady Shop w/IP Rotor	3/20/16 19:00	0.5	11		
Boiler Scaffold to Dance Floor Finish	3/22/16 7:00	2.0	47		

SAFETY / ENVIRONMENTAL

0.0

Safety & Environmental

SAFETY COMMITTEE ACTION ITEMS

0.0

Safety CommitteeArea Manager Issues

HOUSEKEEPING

2.0

Housekeeping

P6 SCHEDULE LINKS

3.0

Level 1 / Milestone Schedule3-Day Look Ahead Schedule5-Day Look Ahead ScheduleLess than 50 hours of Float

ACTION ITEMS

4

Action Items

LESSONS LEARNED

0.0

Lessons Learned

COMMUNICATION

N/A

Contacts & CommunicationSafety Observation Schedule

NOTIFICATIONS

2

Outage NotificationsM116 Tag Out ListWork Sampling

Sunday, March 20, 2016

Notes

G.C. EXH. NO. 2

Appendix000454

M116 SO Master Project			M116 Meeting 3D-8x11	TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MNIP0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
1	Shut Down			24h	26h	19-Mar-16 15:00 A	21-Mar-16 09:00		518h			
2	SD1300	Oper	Main Turbine L/O Out Of Service	1h	1h	20-Mar-16 07:00	20-Mar-16 08:00	0%	207h	SD1290	SD1	2
3	SD1120	Oper	M/M Fill A-D Mill With Water For Protect	8h	8h	20-Mar-16 07:00	20-Mar-16 15:00	0%	192h	OETM#1	SD1, SD1220	2
4	SD1220	Boiler	M/M Fill E-H Mill With Water For Protect	8h	8h	20-Mar-16 15:00	20-Mar-16 23:00	0%	192h	SD1120	SD1	2
5	SD1	Oper	Major Shutdown Activities Complete	0h	0h		20-Mar-16 23:00	0%	192h	OETM#1, SD1	SM3	2
6	Tag Out			26h	28h	20-Mar-16 07:00	21-Mar-16 09:00		518h			
7	Boiler Wash			30h	18h	19-Mar-16 15:00 A	21-Mar-16 01:00		426h			
8	External Boiler Wash			30h	18h	19-Mar-16 15:00 A	21-Mar-16 01:00		426h			
9	EBW1180	Oper	BASEMENT & FLOOR CLEANUP & EQ	30h	14h	19-Mar-16 15:00 A	21-Mar-16 01:00	53.33%	426h	EBW1170, HPE	BA1060, BA100	1
10	HPBW230	Brand	Dismantle Mezz Floor Separate Circus	4h	4h	20-Mar-16 07:00	20-Mar-16 11:00	0%	426h	HPBW220, EBI	EBW1180	1
11	Main Boiler			362h	212h	18-Mar-16 07:00 A	23-Mar-16 03:00		1104h			
12	Boiler General			60h	36h	18-Mar-16 07:00 A	21-Mar-16 19:00		1187h			
13	Lower Windbox			60h	36h	18-Mar-16 07:00 A	21-Mar-16 19:00		1187h			
14	BU172	Ener	Low W/B Cold Side Repairs north in pro	60h	12h	18-Mar-16 07:00 A	20-Mar-16 19:00	80%	1211h	SM0, HPBW170	BU189	2
15	BU1057	Ener	Lower Windbox Strut Repairs	60h	36h	18-Mar-16 07:00 A	21-Mar-16 19:00	40%	10h	SM0, BU3740	1142-200, 1142	2
16	Main Furnace			207h	162h	18-Mar-16 04:00 A	27-Mar-16 01:00		370h			
17	1142-190	LOE	Scaffolding Install Duration	207h	162h	18-Mar-16 04:00 A	27-Mar-16 01:00	21.74%	10h	1142-10, M116	OETM#4	2
18	BW170	Boiler	Remove "B" B/A Clinker Grinder	8h	8h	20-Mar-16 07:00	20-Mar-16 15:00	0%	44h	BW190, BW160	BU240, BW180	2
19	1142-30	Brand	BOILER SCAFFOLD 786' TO 809' (Bet	12h	12h	20-Mar-16 07:00	20-Mar-16 19:00	0%	22h	1142-20	1142-40	2
20	BW180	Boiler	Remove "C" B/A Clinker Grinder	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	44h	BW190, BW170	1412, BU240, M	2
21	1142-40	Brand	BOILER SCAFFOLD 809' TO 835' (Bet	12h	12h	21-Mar-16 07:00	21-Mar-16 19:00	0%	10h	1142-30, BU10	1142-50	2
22	1142-50	Brand	BOILER SCAFFOLD 835' TO 861' (Jus	12h	12h	21-Mar-16 19:00	22-Mar-16 07:00	0%	10h	1142-40	1142-60	2
23	1142-60	Brand	BOILER SCAFFOLD 861' TO 873' & IN	12h	12h	21-Mar-16 19:00	22-Mar-16 07:00	0%	10h	1142-50	1142-70 - DF	2
24	1142-70 - DF	Brand	INSTALL DANCE FLOOR SUREDECK/	6h	6h	22-Mar-16 07:00	22-Mar-16 13:00	0%	10h	1142-60	1142-80 - S DF,	2
25	M116190	Finish M	Boiler Scaffold to Dance Floor Finish	0h	0h		22-Mar-16 13:00	0%	10h	1142-70 - DF	1142-90	1
26	1142-90	Brand	COMPLETE TRUSS LEVEL, TOWER T	12h	12h	22-Mar-16 13:00	23-Mar-16 01:00	0%	10h	1142-80 - S DF	1142-100	2
27	1142-100	Brand	BOILER SCAFFOLD DANCE FLOOR E	12h	12h	23-Mar-16 01:00	23-Mar-16 13:00	0%	10h	1142-90	1142-110	2
28	Lower Furnace			56h	56h	21-Mar-16 01:00	23-Mar-16 09:00		458h			
29	Bottom Ash			56h	56h	21-Mar-16 01:00	23-Mar-16 09:00		458h			

FirstEnergy
Generation Corp.

MAKE SAFETY A WAY OF LIFE

TargetZero®
No Job is Routine

EXHIBIT NO. 662 RECEIVED ☒ REJECTED ☐
CASE NO. 06-CA-16303 CASE NAME FirstEnergy
NO. OF PAGES 21 DATE 8/11/16 REPORTER JAO

M116 SO Master Project			M116 Meeting 3D-8x11	TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
30	M116260	Start M	Bottom Ash Seal Skirt & Trough CIP Pro	0h	0h	21-Mar-16 01:00		0%	426h	EBW1180	BA1020	1
31	BA1020	Ener	DEMO EXTERNAL 3/4" TROUGH SPR	12h	12h	21-Mar-16 07:00	21-Mar-16 19:00	0%	168h	EBW1180, M11	BA1000, BA1030	2
32	BA1030	Ener	REMOVE (3) DRAIN PIPES FROM OVI	12h	12h	22-Mar-16 07:00	23-Mar-16 09:00	0%	162h	BA1020	BA1040	2
33	Penthouse			156h	84h	18-Mar-16 07:00 A	24-Mar-16 19:00		646h			
34	Penthouse General			156h	84h	18-Mar-16 07:00 A	24-Mar-16 19:00		320h			
35	Penthouse Headers			156h	84h	18-Mar-16 07:00 A	24-Mar-16 19:00		320h			
36	BU099	Burn	Removal Insul Blankets Penthouse Hear	24h	12h	18-Mar-16 07:00 A	21-Mar-16 19:00	50%	72h	BU525	BU526, BU062	2
37	BU062	ENGR	Mark Penthouse for Sandblasting	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	99h	BU099	BU526	2
38	BU526	Aval	Sandblast Fin/Platen/Prim Sht Hdrs (Per	36h	36h	21-Mar-16 19:00	23-Mar-16 07:00	0%	192h	BU062, BU099	BU527, BU187,	3
39	BU527	Ener	Laborers Clean-up Penthouse After San	30h	30h	23-Mar-16 07:00	24-Mar-16 17:00	0%	230h	BU526	BU007	2
40	Platen Header			36h	36h	23-Mar-16 07:00	24-Mar-16 19:00		192h			
41	M116670	Start M	Platen Header Inspections Start	0h	0h	23-Mar-16 07:00		0%	192h	BU526	BU187, BU601	1
42	BU187	FQS	Platen Superheater Mag Testing (WFMT)	24h	24h	23-Mar-16 07:00	24-Mar-16 19:00	0%	84h	BU526, SM2, N	BU3620, BU36t	2
43	Attempertor			5h	5h	22-Mar-16 15:00	23-Mar-16 10:00		247h			
44	East Attempertor			5h	5h	22-Mar-16 15:00	23-Mar-16 10:00		247h			
45	BU690	FQS	Borescope East MS Attemp	5h	5h	22-Mar-16 15:00	23-Mar-16 10:00	0%	247h	FWKND210	BU4700, OETM	2
46	Back Pass			250h	130h	15-Mar-16 07:00 A	25-Mar-16 17:00		1028h			
47	Primary Super Heater			10h	10h	21-Mar-16 07:00	21-Mar-16 17:00		436h			
48	BU168	Brand	Scaffold Primary Superheater For Repai	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	436h	1142-2	BU545, BU575	2
49	Economizer Drop System			150h	50h	15-Mar-16 07:00 A	23-Mar-16 17:00		560h			
50	Economizer Drop System Slurry Tank			150h	50h	15-Mar-16 07:00 A	23-Mar-16 17:00		560h			
51	DS1010	Ener	Demo F/A Slurry Tank Interferences	20h	40h	15-Mar-16 07:00 A	23-Mar-16 03:00	0%	560h	DS1000	DS1013, DS101	1
52	DS1012	Ener	Hang Rigging for Slurry Tank Demo	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	600h	DS1000, SM2	DS1020, DS101	1
53	DS1011	Ener	Demo Building Interferences Steam Tra	10h	10h	23-Mar-16 07:00	23-Mar-16 17:00	0%	560h	DS1010	DS1013	1
54	LPA Screens			192h	130h	17-Mar-16 17:00 A	25-Mar-16 17:00		1028h			
55	LPA1580	Brand	Scaffold for Fresh Air Duct Removal (W	40h	30h	17-Mar-16 17:00 A	22-Mar-16 17:00	25%	756h	EBW1110, LPA	LPA1570	2
56	LPA1390	Burn	Remove Front Wall Insulation Lower Ec	12h	12h	18-Mar-16 07:00 A	20-Mar-16 19:00	0%	914h	EBW1130	LPA1490	2
57	LPA1570	Burn	Remove Fresh Air Duct (West Side) 42"	40h	40h	22-Mar-16 17:00	24-Mar-16 17:00	0%	756h	LPA1580	LPA1590	2
58	LPA1040	Ener	LAYOUT (4) PENETRATIONS AND CU'	50h	50h	23-Mar-16 07:00*	25-Mar-16 17:00	0%	346h	EBW1100, LPA	LPA1090, LPA1	2
59	Boiler External Balance Of Plant			236h	212h	19-Mar-16 07:00 A	29-Mar-16 03:00		1104h			

TargetZero®
No Job is Routine

FirstEnergy
Generation Corp.

TAKE SAFETY A WAY OUT **LIFE**

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M116 SO Master Project		M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
30	Start Up Valves			104h	104h	20-Mar-16 07:00	24-Mar-16 15:00		818h			
31	A17230	Start M	Start Up Valves begin	0h	0h	20-Mar-16 07:00		0%	922h	TO-200, BU10	A17240	1
32	"P" Valve			12h	12h	21-Mar-16 07:00	22-Mar-16 11:00		106h			
33	FWKND1	Boiler	"P" Valve Tear Down for Outage Internal	12h	12h	21-Mar-16 07:00	22-Mar-16 11:00	0%	106h	FWKND110	BU4000, A1724	1
34	"P" Block Valve			12h	12h	22-Mar-16 11:00	23-Mar-16 15:00		106h			
35	FWKND11	Boiler	"P" Block Valve Tear Down for Outage Internal	12h	12h	22-Mar-16 11:00	23-Mar-16 15:00	0%	106h	FWKND150, F	BU4110, A1724	1
36	"W" Valve			12h	12h	21-Mar-16 07:00	22-Mar-16 11:00		209h			
37	BU420	I&T	I&T Rebuild W Valve Operators	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	213h	SM2	BU4410, BU430	1
38	East "W" Valve			6h	6h	21-Mar-16 07:00	21-Mar-16 13:00		136h			
39	FWKND2	Boiler	East "W" Valve Tear Down for Outage Internal	6h	6h	21-Mar-16 07:00	21-Mar-16 13:00	0%	136h	FWKND280	BU3870, A1724	1
40	West "W" Valve			6h	6h	21-Mar-16 13:00	22-Mar-16 11:00		136h			
41	FWKND3	Boiler	West "W" Valve Tear Down for Outage Internal	6h	6h	21-Mar-16 13:00	22-Mar-16 11:00	0%	136h	FWKND300, F	A17240, BU387	1
42	"V" Valve			16h	16h	21-Mar-16 07:00	24-Mar-16 15:00		104h			
43	East "V" Valve			16h	16h	21-Mar-16 07:00	22-Mar-16 15:00		104h			
44	FWKND2	Boiler	East "V" Valve Tear Down for Outage Internal	16h	16h	21-Mar-16 07:00	22-Mar-16 15:00	0%	104h	FWKND200	BU3890, A1724	1
45	West "V" Valve			16h	16h	23-Mar-16 07:00	24-Mar-16 15:00		104h			
46	FWKND2	Boiler	West "V" Valve Tear Down for Outage Internal	16h	16h	23-Mar-16 07:00	24-Mar-16 15:00	0%	104h	FWKND220, F	BU3890, A1724	1
47	"A" Valve			52h	52h	21-Mar-16 07:00	23-Mar-16 11:00		650h			
48	FWKND3	I&T	Remove "A" Valve Disconnects for Outage	2h	2h	21-Mar-16 07:00	21-Mar-16 09:00	0%	326h	FWKND260	FWKND330, F	1
49	FWKND3	Boiler	"A" Valve Tear Down for Outage Internal	8h	8h	22-Mar-16 11:00	23-Mar-16 11:00	0%	154h	FWKND320, F	A17240, BU489	1
50	"B" Valve			2h	2h	21-Mar-16 11:00	21-Mar-16 13:00		354h			
51	FWKND3	I&T	Remove "B" Valve Disconnects for Outage	2h	2h	21-Mar-16 11:00	21-Mar-16 13:00	0%	354h	FWKND360	FWKND350, F	1
52	"C" Valve			2h	2h	21-Mar-16 09:00	21-Mar-16 11:00		340h			
53	FWKND3	I&T	Remove "C" Valve Disconnects for Outage	2h	2h	21-Mar-16 09:00	21-Mar-16 11:00	0%	340h	FWKND320	FWKND370, F	1
54	"D" Valve			2h	2h	21-Mar-16 13:00	21-Mar-16 15:00		394h			
55	FWKND3	I&T	Remove "D" Valve Disconnects for Outage	2h	2h	21-Mar-16 13:00	21-Mar-16 15:00	0%	394h	FWKND340	FWKND390	1
56	Boiler Positive Extraction Check Valves			56h	56h	21-Mar-16 07:00	23-Mar-16 15:00		1170h			
57	A17180	Start M	Extraction Valves begin (Start 1A I/L)	0h	0h	21-Mar-16 07:00		0%	1226h	SM2	A17190	1
58	3B HP HTR INLET CHECK VALVE			8h	8h	21-Mar-16 07:00	21-Mar-16 15:00		220h			
59	BU5900	Boiler	Disassemble 3B HP HTR INLET CHECK VALVE	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	220h	SM2	A17190, BU591	1

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#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
90	3A HP HTR INLT CK VLV			8h	8h	22-Mar-16 07:00	22-Mar-16 15:00		140h			
91	BU5840	Boiler	Disassemble 3A HP HTR INLET CK VLV	8h	8h	22-Mar-16 07:00	22-Mar-16 15:00	0%	140h	SM2, BU5900	BU5850, A1719	1
92	2B HP HTR INLT CK VLV			8h	8h	23-Mar-16 07:00	23-Mar-16 15:00		140h			
93	BU5720	Boiler	Disassemble 2B HP HTR INLET CK VLV	8h	8h	23-Mar-16 07:00	23-Mar-16 15:00	0%	140h	SM2, BU5840	BU5730, A1719	1
94	Safety Valves			55h	55h	21-Mar-16 07:00	23-Mar-16 14:00		1151h			
95	A17090	Finish M	Safety Valves Disassembly Finished	0h	0h		21-Mar-16 07:00	0%	1206h	A17080, BU563	A17100	1
96	A17080	Start M	Safety Valves begin	0h	0h	21-Mar-16 07:00		0%	1206h	SM2, BU5380	A17090	1
97	HP Htr Safety Valves			55h	55h	21-Mar-16 07:00	23-Mar-16 14:00		840h			
98	HP Heater High Level Dump Valves			55h	55h	21-Mar-16 07:00	23-Mar-16 14:00		840h			
99	2B HP Heater High Level Dump Valve 4546			55h	55h	21-Mar-16 07:00	23-Mar-16 14:00		840h			
100	BU6980	Brand	Install 2B Hi-Level Dump Valve Scaffoldli	4h	4h	21-Mar-16 07:00	21-Mar-16 11:00	0%	300h	SM2	BU7120, BU699	1
101	BU6990	Burn	Remove 2B Hi-Level Dump Valve Insula	10h	10h	21-Mar-16 11:00	22-Mar-16 11:00	0%	300h	BU6980	BU7000	1
102	BU7000	I&T	Remove 2B Hi-Level Dump Valve Valve	3h	3h	22-Mar-16 11:00	22-Mar-16 14:00	0%	200h	BU6990	BU7010	1
103	BU7010	Elect	Remove 2B Hi-Level Dump Valve Valve	8h	8h	22-Mar-16 14:00	23-Mar-16 14:00	0%	200h	BU7000	BU7020	1
104	3B HP Heater High Level Dump Valve 4542			47h	47h	21-Mar-16 11:00	23-Mar-16 10:00		844h			
105	BU7400	Brand	Install 3B Hi-Level Dump Valve Scaffoldli	4h	4h	21-Mar-16 11:00	21-Mar-16 15:00	0%	306h	SM2, BU7120	BU7410	1
106	BU7410	Burn	Remove 3B Hi-Level Dump Valve Insula	10h	10h	21-Mar-16 15:00	22-Mar-16 15:00	0%	306h	BU7400	BU7420	1
107	BU7420	I&T	Remove 3B Hi-Level Dump Valve Valve	3h	3h	23-Mar-16 07:00	23-Mar-16 10:00	0%	204h	BU7410	BU7430	1
108	Air Heater			40h	44h	19-Mar-16 07:00 A	23-Mar-16 11:00		206h			
109	"A" Air Heater			40h	44h	19-Mar-16 07:00 A	23-Mar-16 11:00		76h			
110	"A" A/H Removal/Disassembly			40h	44h	19-Mar-16 07:00 A	23-Mar-16 11:00		76h			
111	AHA135	Ener	Remove Hot Side Radial Seal "A" A/H	10h	10h	19-Mar-16 07:00 A	22-Mar-16 03:00	0%	46h	AHA700, AHA1	AHA130	2
112	AHA150	Ener	Remove Cold Side Baskets "A" A/H	30h	17h	19-Mar-16 14:00 A	23-Mar-16 11:00	43.33%	46h	AHA130, AHA1	AHA160, AH2	2
113	AHA130	Ener	Remove Hot Baskets Side "A" A/H	30h	17h	19-Mar-16 14:00 A	22-Mar-16 14:00	43.33%	46h	AHA135	AHA150	2
114	AHA140	API-AIs	Initial "A" Air Heater Inspection	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	46h	AHA100, AHA1	AHA135	2
115	AHA710	Ener	Blank Off "A" Side SCR Bypass Duct	20h	20h	21-Mar-16 07:00	22-Mar-16 03:00	0%	100h	AHA740, AHA1	1412	2
116	"B" Air Heater			37h	44h	19-Mar-16 07:00 A	23-Mar-16 11:00		206h			
117	"B" A/H Removal/Disassembly			37h	44h	19-Mar-16 07:00 A	23-Mar-16 11:00		206h			
118	BHA135	Ener	Remove Hot Side Radial Seal "B" A/H	10h	10h	19-Mar-16 07:00 A	22-Mar-16 03:00	0%	46h	BHA850, BHA7	BHA130, AHA1	2
119	BHA130	Ener	Remove Hot Baskets Side "B" A/H	30h	17h	19-Mar-16 14:00 A	22-Mar-16 14:00	43.33%	206h	BHA135	BHA150	2

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20	BHA150	Ener	Remove Cold Side Baskets "B" A/H	30h	17h	19-Mar-16 14:00 A	23-Mar-16 11:00	43.33%	206h	BHA130, BHA1	AH2, BHA160	2
21	BHA140	API-Als	Initial "B" Air Heater Inspection	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	46h	BHA100, BHA1	BHA135	2
22	FD Fans			40h	40h	21-Mar-16 07:00	25-Mar-16 15:00		245h			
23	BU675	Ener	Open & Inspect 1A & 1B FD Fans For R	16h	16h	21-Mar-16 07:00	22-Mar-16 15:00	0%	200h	SM2	BU7700, BHA7	2
24	"A" FD Fan			24h	24h	21-Mar-16 07:00	23-Mar-16 15:00		245h			
25	BU096	Elect	1A FD Fan Motor & Breaker PM	0h	0h	21-Mar-16 07:00	21-Mar-16 07:00	0%	245h	SM2	BU146	2
26	BU7700	I&T	Remove 1A FD Fan Damper Cylinder &	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	245h	BU675	BU7710, BU473	2
27	BU087	Elect	1A FD Fan Breaker PM	8h	8h	23-Mar-16 07:00	23-Mar-16 15:00	0%	261h	BU675	BU146	2
28	"B" FD Fan			40h	40h	21-Mar-16 07:00	25-Mar-16 15:00		245h			
29	BU7740	Elect	1B FD Fan Motor & Breaker PM	40h	40h	21-Mar-16 07:00	25-Mar-16 15:00	0%	245h	SM2	BU7780	2
30	BU7730	Elect	1B FD Fan Breaker PM	8h	8h	23-Mar-16 07:00	23-Mar-16 15:00	0%	261h	BU675	BU7780	2
31	PA Fans			188h	188h	21-Mar-16 07:00	29-Mar-16 03:00		826h			
32	"A" PA Fan			188h	188h	21-Mar-16 07:00	29-Mar-16 03:00		826h			
33	BHA780	Brand	Install 1A PA Fan Scaffolding	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	590h	BU7850	DS2560	2
34	DS2560	Aval	Sandblast 1A PA Fan Rotor for UTT Insp	4h	4h	21-Mar-16 17:00	21-Mar-16 21:00	0%	416h	BHA780	DS2570	3
35	DS2570	FQS	UTT Inspection on 1A PA Fan Rotor	10h	10h	22-Mar-16 07:00	22-Mar-16 17:00	0%	290h	DS2560	BU7880, OETV	2
36	BU7880	Ener	1A PA Fan Weld Repairs Per UTT Insp	110h	110h	22-Mar-16 17:00	29-Mar-16 03:00	0%	586h	DS2570	BHA790, BU78	2
37	"B" PA Fan			188h	188h	21-Mar-16 07:00	29-Mar-16 03:00		826h			
38	BHA800	Brand	Install 1B PA Fan Scaffolding	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	590h	BU7850	DS2580	2
39	DS2580	Aval	Sandblast 1B PA Fan Rotor for UTT Insp	4h	4h	21-Mar-16 17:00	21-Mar-16 21:00	0%	416h	BHA800	DS2590	3
40	DS2590	FQS	UTT Inspection on 1B PA Fan Rotor	10h	10h	22-Mar-16 07:00	22-Mar-16 17:00	0%	290h	DS2580	BU7910, OETV	2
41	BU7910	Ener	1B PA Fan Weld Repairs Per UTT Insp	110h	110h	22-Mar-16 17:00	29-Mar-16 03:00	0%	586h	DS2590	BU7920, BHA8	2
42	"C" PA Fan			188h	188h	21-Mar-16 07:00	29-Mar-16 03:00		826h			
43	BHA820	Brand	Install 1C PA Fan Scaffolding	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	590h	BU7850	DS2600	2
44	DS2600	Aval	Sandblast 1C PA Fan Rotor for UTT Insp	4h	4h	21-Mar-16 17:00	21-Mar-16 21:00	0%	416h	BHA820	DS2610	3
45	DS2610	FQS	UTT Inspection on 1C PA Fan Rotor	10h	10h	22-Mar-16 07:00	22-Mar-16 17:00	0%	290h	DS2600	BU7940, OETV	2
46	BU7940	Ener	1C PA Fan Weld Repairs Per UTT Insp	110h	110h	22-Mar-16 17:00	29-Mar-16 03:00	0%	586h	DS2610	BHA830, BU79	2
47	FAC/HEP Inspection			56h	56h	21-Mar-16 07:00	23-Mar-16 15:00		1236h			
48	M116			56h	56h	21-Mar-16 07:00	23-Mar-16 15:00		1236h			
49	FAC Inspections			50h	50h	21-Mar-16 07:00	23-Mar-16 09:00		1242h			

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150	2.2_"B" Valve (DA Tank 8A)			5h	5h	21-Mar-16 19:00	22-Mar-16 00:00		392h			
151	FAC-10i	Burn	Remove Insulation "B" Valve	5h	5h	21-Mar-16 19:00	22-Mar-16 00:00	0%	392h	EBW1080, FAC	FAC-1850, FAC	1
152	2.4_"D" Valve (Mezz Floor Between BFP's)			28h	28h	21-Mar-16 23:00	23-Mar-16 03:00		912h			
153	FAC-12i	Burn	Remove Insulation "D" Valve	8h	8h	21-Mar-16 23:00	22-Mar-16 11:00	0%	592h	FAC-1210, HEI	FAC-1230, FAC	1
154	FAC-12i	Aval	Wrap "D" Valve for Sandblasting	4h	4h	22-Mar-16 13:00	22-Mar-16 17:00	0%	380h	HRH-HEP-122i	FAC-1295, FAC	1
155	FAC-12i	Aval	Sandblast "D" Valve	10h	10h	22-Mar-16 17:00	23-Mar-16 03:00	0%	380h	FAC-1220, FAC	FAC-1240	3
156	2.5_1B 18" BFP Discharge at Flow Nozzle (Mezz by "D" V			22h	22h	22-Mar-16 11:00	23-Mar-16 09:00		988h			
157	FAC-12i	Burn	Remove Insulation 1B 18" BFP Dischar	3h	3h	22-Mar-16 11:00	22-Mar-16 14:00	0%	592h	SM2, FAC-128i	FAC-1300, FAC	1
158	FAC-12i	Aval	Wrap for Sandblasting 1B 18" BFP Discl	2h	2h	23-Mar-16 07:00	23-Mar-16 09:00	0%	414h	FAC-1225, FAC	FAC-1300, HEF	1
159	2.16_90" Condenser South Pass Inlet & Outlet (E & W Bas			17h	17h	21-Mar-16 07:00	22-Mar-16 00:00		1275h			
160	FAC-20i	FQS	NDE 90" Condenser South Pass Inlet &	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	522h	FAC-2000	OETM#9, FAC-	1
161	FAC-20i	Ener	Repairs 90" Condenser South Pass Inle	8h	8h	21-Mar-16 15:00	21-Mar-16 23:00	0%	923h	FAC-2010	FAC-2030	1
162	FAC-20i	Brand	Remove Scaffolding 90" Condenser Sol	1h	1h	21-Mar-16 23:00	22-Mar-16 00:00	0%	923h	FAC-2030	FAC/HEP	1
163	2.16_1A Condenser Circulating Water Pump Suction & Di			17h	17h	21-Mar-16 07:00	22-Mar-16 00:00		1275h			
164	FAC-20i	FQS	NDE 1A Condenser Circulation Water Pi	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	522h	FAC-2070	FAC-2090, OET	1
165	FAC-20i	Ener	Repairs 1A Condenser Circulation Wate	8h	8h	21-Mar-16 15:00	21-Mar-16 23:00	0%	923h	FAC-2080	FAC-2100	1
166	FAC-21i	Brand	Remove Scaffolding 1A Condenser Circi	1h	1h	21-Mar-16 23:00	22-Mar-16 00:00	0%	923h	FAC-2100	FAC/HEP	1
167	HEP Inspections			54h	54h	21-Mar-16 09:00	22-Mar-16 15:00		842h			
168	2.1-2.4_4 Turbine Steam Lead CV 1-4 to HP TRB MSMC-14			48h	48h	21-Mar-16 09:00	23-Mar-16 09:00		848h			
169	2.1-2.4_4-MSMC-14-17 - 1" Dm, Trb CV 1-4 to HP Trb			48h	48h	21-Mar-16 09:00	23-Mar-16 09:00		848h			
170	HEP-1i	Burn	Remove Insulation Turbine Steam 1" Dri	14h	14h	21-Mar-16 09:00	21-Mar-16 23:00	0%	592h	HEP-1000, SM	FAC-1220, HEF	1
171	HEP-1i	Aval	Wrap for Sandblast Turbine Steam 1" Di	10h	10h	22-Mar-16 09:00	23-Mar-16 09:00	0%	358h	HEP-1010, HRI	HEP-1645, HEF	1
172	2.10-2.18_Meazz Level 9 Locations			18h	18h	22-Mar-16 17:00	23-Mar-16 15:00		592h			
173	HEP-14i	Burn	Remove Insulation Mezz Level 9 Locat	18h	18h	22-Mar-16 17:00	23-Mar-16 15:00	0%	592h	HEP-1420, SM	HEP-1080, HEF	1
174	2.22_MSMC-13 1"Pressure Connection Mezz Fir Between			1h	1h	22-Mar-16 14:00	22-Mar-16 15:00		592h			
175	HEP-16i	Burn	Remove Insulation 1" Pressure Connect	1h	1h	22-Mar-16 14:00	22-Mar-16 15:00	0%	592h	HEP-1630, FAC	HEP-1710, HEF	1
176	2.23_MSH-66 Welded Lug Mezz Floor Between SV#2 & SV			2h	2h	22-Mar-16 15:00	22-Mar-16 17:00		592h			
177	HEP-17i	Burn	Remove Insulation Welded Lug Mezz FI	2h	2h	22-Mar-16 15:00	22-Mar-16 17:00	0%	592h	SM2, HEP-164i	HEP-1715, HEF	1
178	2.24-2.26_Turbine Deck Level 2 Locations			6h	6h	21-Mar-16 19:00	22-Mar-16 01:00		518h			
179	HEP-17i	Burn	Remove Insulation Turbine Deck Level 2	6h	6h	21-Mar-16 19:00	22-Mar-16 01:00	0%	518h	SM2, HEP-177i	HEP-1785, HRI	1

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0	2.26_RG Plug #12 4th Flr at Main Steam Line				3h	3h	22-Mar-16 00:00	22-Mar-16 03:00		392h			
1	HEP-18:		Burn	Remove Insulation RG Plug #12	3h	3h	22-Mar-16 00:00	22-Mar-16 03:00	0%	392h	SM2, FAC-1361	HRH-HEP-1291	1
2	2.28-2.29_10th Flr, N Side at Flash Tank 2 Locations 12" N				4h	4h	21-Mar-16 15:00	21-Mar-16 19:00		392h			
3	HEP-19:		Burn	Remove Insulation 10th Flr, N Side at Flr	4h	4h	21-Mar-16 15:00	21-Mar-16 19:00	0%	392h	HEP-1920, HEI	HEP-1995, FAC	1
4	Hot Reheat Pipe HEP Inspection				53h	53h	21-Mar-16 07:00	23-Mar-16 12:00		696h			
5	2.1-2.2 Turbine Deck 2 Locations				53h	53h	21-Mar-16 07:00	23-Mar-16 12:00		696h			
6	HRH-HE		Burn	Remove Insulation Turbine Deck 2 Loca	12h	12h	21-Mar-16 07:00	21-Mar-16 19:00	0%	508h	SM2, HRH-HEI	HRH-HEP-1011	1
7	HRH-HE		Aval	Wrap for Sandblast Turbine Deck 2 Loc	5h	5h	23-Mar-16 07:00	23-Mar-16 12:00	0%	290h	HRH-HEP-1010	HRH-HEP-1021	1
8	2.3-2.8_Mezz Floor 6 Locations				24h	24h	22-Mar-16 01:00	23-Mar-16 09:00		518h			
9	HRH-HE		Burn	Remove Insulation Mezz Floor 6 Locatic	24h	24h	22-Mar-16 01:00	23-Mar-16 09:00	0%	518h	SM2, HRH-HEI	FAC-1430, HRH	1
10	2.9-2.14_Mezz Floor 6 Locations				8h	8h	21-Mar-16 07:00	21-Mar-16 15:00		809h			
11	HRH-HE		Brand	Install Scaffolding Mezz Floor 6 Locator	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	809h	BU1010, SM2	HRH-HEP-1150	1
12	2.15_HRH IP Trb Inlet Mezz Flr Under IP Trb on N Side H				52h	52h	21-Mar-16 07:00	23-Mar-16 11:00		865h			
13	HRH-HE		Burn	Remove Insulation IP Trb Inlet Mezz Flr	2h	2h	21-Mar-16 07:00	21-Mar-16 09:00	0%	592h	SM2, HRH-HEI	HEP-1010, HRH	1
14	HRH-HE		Aval	Wrap for Sandblast IP Trb Inlet Mezz Flr	4h	4h	22-Mar-16 09:00	22-Mar-16 13:00	0%	358h	HRH-HEP-1220	HRH-HEP-1231	1
15	HRH-HE		Aval	Sandblast IP Trb Inlet Mezz Flr Under IF	10h	10h	22-Mar-16 17:00	23-Mar-16 03:00	0%	360h	HRH-HEP-1225	HRH-HEP-1240	3
16	HRH-HE		FQS	NDE IP Trb Inlet Mezz Flr Under IP Trb	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	373h	HRH-HEP-1230	OETM#9, HRH	1
17	Seam Weld Inspections Spools 5,6, 8-11				50h	50h	21-Mar-16 07:00	23-Mar-16 09:00		534h			
18	Spools 5 & 6 Seam Weld Inspection 6th Flr to Mezz				16h	16h	22-Mar-16 07:00	22-Mar-16 23:00		392h			
19	HRH-HE		Burn	Remove Insulation for Seam Weld Inspe	16h	16h	22-Mar-16 07:00	22-Mar-16 23:00	0%	392h	EBW1120, HEF	HRH-HEP-1301	1
20	Spool 8 Seam Weld Inspection Mezz to "Y"				50h	50h	21-Mar-16 07:00	23-Mar-16 09:00		504h			
21	HRH-HE		Burn	Remove Insulation for Seam Weld Inspe	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	360h	SM2, HRH-HEI	HRH-HEP-1371	1
22	HRH-HE		Aval	Wrap for Sandblast for Seam Weld Insp	2h	2h	23-Mar-16 07:00	23-Mar-16 09:00	0%	210h	HRH-HEP-1360	HRH-HEP-1371	1
23	Coal System				100h	100h	21-Mar-16 07:00	25-Mar-16 11:00		1084h			
24	Pulverizers				100h	100h	21-Mar-16 07:00	25-Mar-16 11:00		1084h			
25	M1	Boiler	Boiler Coal System Pulverizer/Feeder/D		0h	0h	21-Mar-16 07:00		0%	1184h	TO-250, TO-24	A16980, A16971	2
26	Mills				36h	36h	21-Mar-16 07:00	25-Mar-16 11:00		8h			
27	"A" Mill				36h	36h	21-Mar-16 07:00	25-Mar-16 11:00		8h			
28	BU8970	Boiler	Open & Inspect Mill/Dampers from Drun		4h	4h	21-Mar-16 07:00	21-Mar-16 11:00	0%	8h	SM2	BU8990	2
29	BU8990	Boiler	Minor Mill Repairs		32h	32h	21-Mar-16 11:00	25-Mar-16 11:00	0%	8h	BU8970	BU8980	2

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M116 SO Master Project			M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont			MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
210	Heater Banks			20h	20h	21-Mar-16 07:00	22-Mar-16 17:00		268h			
211	DA Tank			20h	20h	21-Mar-16 07:00	22-Mar-16 17:00		268h			
212	BU283	Brand	Install Exterior DA Storage Tank Scaffok	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	260h	SM2	BU3750	2
213	BU206	Brand	Install Outside Scaffolding DA Tank for T	20h	20h	21-Mar-16 07:00	22-Mar-16 17:00	0%	268h	SM2	BU396	2
214	Turbine			944h	944h	20-Mar-16 07:00	28-Apr-16 15:00		373h			
215	Turbine EHC Fluid System			8h	8h	21-Mar-16 07:00	21-Mar-16 15:00		286h			
216	BU083	Elect	1A EHC Motor & Breaker PM	4h	4h	21-Mar-16 07:00	21-Mar-16 11:00	0%	286h	SM0, SM2	BU194	2
217	BU194	Elect	1B EHC Motor & Breaker PM	4h	4h	21-Mar-16 11:00	21-Mar-16 15:00	0%	286h	BU083	OETM#14	2
218	Condenser			52h	52h	21-Mar-16 07:00	23-Mar-16 11:00		390h			
219	M1161000	Start M	Condenser Hydro Prep Start	0h	0h	21-Mar-16 07:00*		0%	430h	CON1000	CON1030	2
220	CON1010	Brand	Install Condenser Water Box Platforms	2h	2h	21-Mar-16 07:00*	21-Mar-16 09:00	0%	390h	CON1000	CON1040	2
221	CON1020	I&T	Set Up Ladders & Lights	3h	3h	21-Mar-16 07:00*	21-Mar-16 10:00	0%	431h	CON1000	CON1050	2
222	CON1030	Burn	Clean Water Boxes of Debris	4h	4h	21-Mar-16 07:00	21-Mar-16 11:00	0%	430h	CON1000, M11	CON1050	2
223	CON1140	Turb	Set Up for Condenser Hydro	8h	8h	22-Mar-16 07:00	22-Mar-16 15:00	0%	410h	CON1040	CON1070	2
224	CON1040	ENGR	Set Up & Valve Condenser for Hydro	20h	20h	22-Mar-16 07:00	23-Mar-16 03:00	0%	390h	CON1010	CON1060, COI	2
225	CON1050	ENGR	Add Dye & Fill Hotwell to Bottom Circulal	4h	4h	23-Mar-16 03:00	23-Mar-16 07:00	0%	390h	CON1020, COI	CON1070, M11	2
226	M1161010	Start M	Condenser Hydro Fill Start	0h	0h	23-Mar-16 07:00		0%	390h	CON1050	CON1060	2
227	CON1060	I&T	Watch Hotwell Fill to Bottom Circulator T	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	390h	CON1040, M11	CON1070	2
228	Turbine Pumps			944h	944h	20-Mar-16 07:00	28-Apr-16 15:00		192h			
229	Circulating Water Pumps			8h	8h	21-Mar-16 07:00	21-Mar-16 15:00		1287h			
230	M1161160	Start M	CWP Disassembly & Repair Start	0h	0h	21-Mar-16 15:00		0%	1287h	CWPA1060		2
231	A Circ Water Pump			8h	8h	21-Mar-16 07:00	21-Mar-16 15:00		80h			
232	CWPA1050	Turb	Remove Cooling Debris Screens	4h	4h	21-Mar-16 07:00	21-Mar-16 11:00	0%	80h	SM2	CWPA1060	2
233	CWPA1060	Turb	Install Sump Pump	4h	4h	21-Mar-16 11:00	21-Mar-16 15:00	0%	80h	CWPA1050	CWPA1010, M1	2
234	Turbine/Generator GE Overhaul			1577h	1319h	07-Mar-16 07:00 A	14-May-16 06:00		0h			
235	A16930	GE	GE Manpower Labor	1670h	1319h	07-Mar-16 07:00 A	14-May-16 06:00	21.02%	0h	A10380	A9280	2
236	Front Standard EHC			719h	575h	14-Mar-16 16:00 A	13-Apr-16 06:00		744h			
237	Disassembly			215h	71h	14-Mar-16 15:00 A	23-Mar-16 06:00		1248h			
238	A10670	I&T	Remove Instrumentation and Conduit (C	2h	2h	14-Mar-16 15:00 A	20-Mar-16 09:00	0%	1317h	A10370		2

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M116 SO Master Project		M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MNIP0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
39	A10680	GE	Unbolt T1 Brg Oil Deflector UH	2h	1h	17-Mar-16 13:00 A	20-Mar-16 08:00	0%	247h	A10370	A10690	2
40	A10700	GE	Disassemble Front Standard Cover	4h	4h	20-Mar-16 08:00	20-Mar-16 12:00	0%	247h	A10690	A10660, A10720	2
41	A10660	GE	Seal Off All Openings, Cover Drain Lines	1h	1h	20-Mar-16 12:00	20-Mar-16 13:00	0%	876h	A10700	A10710	2
42	A10720	I&T	FE Techs Unwire T1 Bearing and Probe	8h	8h	20-Mar-16 12:00	20-Mar-16 20:00	0%	247h	A10700	A10740	2
43	A10710	GE	Unbolt and Remove LH T1 Oil Deflector	2h	2h	20-Mar-16 13:00	20-Mar-16 15:00	0%	876h	A10660	A10540	2
44	A10740	GE	Unbolt and Remove UH T1 Brg and Per	2h	2h	20-Mar-16 20:00	20-Mar-16 22:00	0%	247h	A10720	A10730	2
45	A10730	GE	Unbolt and Remove UH MOP Casing ar	1h	1h	20-Mar-16 22:00	20-Mar-16 23:00	0%	247h	A10740	A10750, A10580	2
46	A10750	GE	Take Opening Clearances on MOP	2h	2h	20-Mar-16 23:00	21-Mar-16 01:00	0%	247h	A10730	A8560	2
47	A10760	GE	Disassemble Front Standard Check Val	4h	4h	23-Mar-16 02:00	23-Mar-16 06:00	0%	753h	A8560	A10610	2
48	Clean & Inspect			92h	92h	20-Mar-16 15:00	24-Mar-16 11:00		1104h			
49	Repairs & Non-Standard Work			565h	565h	20-Mar-16 17:00	13-Apr-16 06:00		656h			
50	HP Section			213h	143h	16-Mar-16 10:00 A	26-Mar-16 06:00		585h			
51	Disassembly			213h	143h	16-Mar-16 10:00 A	26-Mar-16 06:00		454h			
52	A8630	GE	Unbolt and Remove UH N1 and N2 Pkg	3h	1h	16-Mar-16 10:00 A	20-Mar-16 08:00	0%	162h	A8450	A8650	2
53	A8650	GE	Take Rotor Postions at N1 and N2	1h	1h	18-Mar-16 23:00 A	20-Mar-16 09:00	0%	162h	A8630	A8510	2
54	A8510	GE	Remove Gib Key Access Cover and Clin	4h	4h	20-Mar-16 09:00	20-Mar-16 13:00	0%	162h	A8500, A8650	A8520	2
55	A8460	GE	Rig and Remove Upper Outer Shell	6h	6h	20-Mar-16 13:00	20-Mar-16 19:00	0%	162h	A8600, A8610,	A8530, A8080, /	2
56	A8530	GE	Unbolt Upper Inner Shell and Packing H	8h	8h	20-Mar-16 19:00	21-Mar-16 03:00	0%	162h	A8460, A8660	A8540, A8470	2
57	A8540	GE	Measure HP Inner Shell Horizontal Joint	1h	1h	21-Mar-16 03:00	21-Mar-16 04:00	0%	162h	A8530	A8470	2
58	A8470	GE	Rig and Remove Upper Inner Shell	4h	4h	21-Mar-16 04:00	21-Mar-16 08:00	0%	162h	A8530, A8540	A8550, A8480	2
59	A8550	GE	Remove UH Nozzle, Diaphragms, N1 ai	12h	12h	21-Mar-16 08:00	21-Mar-16 20:00	0%	162h	A8470	A8480, A8700	2
60	A8480	GE	Remove UH Packing	12h	12h	21-Mar-16 20:00	22-Mar-16 08:00	0%	202h	A8470, A8550	A8620	2
61	A8700	GE	Steam Path Audit	72h	72h	21-Mar-16 20:00	24-Mar-16 20:00	0%	162h	A8550	A8580	2
62	A8620	GE	Take Rotor Positions (During Disassemi	2h	2h	22-Mar-16 08:00	22-Mar-16 10:00	0%	202h	A8480	A8560, A8670	2
63	A8670	GE	Take Opening Clearances on HP Sectio	12h	12h	22-Mar-16 10:00	22-Mar-16 22:00	0%	202h	A8620	A8560	2
64	A8560	GE	Rig and Remove Rotor (Place in Shippin	4h	4h	22-Mar-16 22:00	23-Mar-16 02:00	0%	202h	A8670, A8620,	A8570, A9630, /	2
65	A8570	GE	T1 and T2 Brgs: Remove LH Bearing	2h	2h	23-Mar-16 02:00	23-Mar-16 04:00	0%	202h	A8560	A10590, A8580	2
66	A8680	GE	Remove LH Packing	4h	4h	23-Mar-16 02:00	23-Mar-16 06:00	0%	454h	A8560	A8690	2
67	A8690	GE	As Found Topless Alignment Measurem	72h	72h	23-Mar-16 06:00	26-Mar-16 06:00	0%	454h	A8680	A8710	2
68	Clean & Inspect			91h	91h	20-Mar-16 19:00	24-Mar-16 14:00		270h			

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M116 SO Master Project			M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont			MNIP0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
269	Repairs & Non-Standard Work			24h	24h	22-Mar-16 07:00	23-Mar-16 07:00		656h			
270	"A" Coupling Section			596h	575h	18-Mar-16 21:00 A	13-Apr-16 06:00		744h			
271	Disassembly			90h	69h	18-Mar-16 21:00 A	23-Mar-16 04:00		1250h			
272	A9510	GE	Center Rotor in T2 and T3 Bearings	1h	1h	18-Mar-16 21:00 A	20-Mar-16 08:00	0%	1318h	A9490, A9500		2
273	A9560	GE	Unbolt and Separate "A" Coupling (Jack	12h	2h	18-Mar-16 21:00 A	20-Mar-16 09:00	0%	95h	A9590	A9570	2
274	A9570	GE	As Found "A" Coupling Alignment Check	4h	4h	20-Mar-16 09:00	20-Mar-16 13:00	0%	95h	A9560	A9600	2
275	A9600	GE	Rotor Position Checks (Coupling Separ	2h	2h	20-Mar-16 13:00	20-Mar-16 15:00	0%	95h	A9570	A9610, A12790	2
276	A9610	GE	Perform Thrust Bearing Bump Check	4h	4h	20-Mar-16 15:00	20-Mar-16 19:00	0%	461h	A9600	A9580	2
277	A9580	GE	Disassemble Thrust Bearing	4h	4h	20-Mar-16 19:00	20-Mar-16 23:00	0%	461h	A9610	A9400, A9630, /	2
278	A9630	GE	Remove LH T2 and T3 Bearings	2h	2h	23-Mar-16 02:00	23-Mar-16 04:00	0%	410h	A9580, A8560	A9670, A9660, /	2
279	A17790		'A' Coupling Disassembly Complete	0h	0h		23-Mar-16 04:00	0%	410h	A9630	A9470, A9660, /	
280	Clean & Inspect			90h	90h	20-Mar-16 07:00	24-Mar-16 01:00		835h			
281	Repairs & Non-Standard Work			557h	557h	21-Mar-16 01:00	13-Apr-16 06:00		410h			
282	IP Section			186h	90h	15-Mar-16 16:00 A	24-Mar-16 01:00		679h			
283	Disassembly			162h	66h	15-Mar-16 15:00 A	23-Mar-16 01:00		378h			
284	A12870	GE	Remove Glb Keys from IP Outer Shell	1h	1h	15-Mar-16 15:00 A	20-Mar-16 08:00	0%	96h	A12780	A12950	2
285	A12820	GE	Take Opening Clearances	12h	6h	18-Mar-16 22:00 A	20-Mar-16 14:00	0%	96h	A12950	A12790	2
286	A12790	GE	Rig and Remove Rotor (Place in Shippin	4h	4h	21-Mar-16 09:00	21-Mar-16 13:00	0%	77h	A10270, A1282	A12800, OETM	2
287	A12880	GE	Remove IP Packing	8h	8h	21-Mar-16 13:00	21-Mar-16 21:00	0%	378h	A12790	A12890	2
288	A12890	GE	As Found Topless Alignment Measurem	24h	24h	21-Mar-16 21:00	22-Mar-16 21:00	0%	378h	A12880	A12800	2
289	A12800	GE	Thrust, T3 and T4 Brgs: Remove LH Be	4h	4h	22-Mar-16 21:00	23-Mar-16 01:00	0%	378h	A12790, A12890	A13030	2
290	Repairs & Non-Standard Work			60h	60h	21-Mar-16 13:00	24-Mar-16 01:00		679h			
291	A12200	Shpng	Prep IP Rotor for Shipping Off Site To GI	4h	4h	21-Mar-16 13:00	21-Mar-16 17:00	0%	235h	A12790	A12150	2
292	A12150	Shpng	Ship Rotor Off Site To GE Schnectady	24h	24h	21-Mar-16 17:00	22-Mar-16 17:00	0%	235h	A12200, A12790	A12120, A12170	2
293	GE DFI Rotor Shop Schedule			8h	8h	22-Mar-16 17:00	23-Mar-16 01:00	0%	235h	A12150	A12290, A12130	2
294	A12120	GEShp	IP GE Shop Work: Receive Rotor and C	24h	24h	22-Mar-16 17:00	23-Mar-16 17:00	0%	687h	A12150	A12160	2
295	A12170	GEShp	IP GE Shop Work: Receive and Invento	16h	16h	23-Mar-16 01:00	23-Mar-16 17:00	0%	235h	A12120	A12140	2
296	A12130	GEShp	IP GE Shop Work: Set-Up Rotor in Balai	24h	24h	23-Mar-16 01:00	24-Mar-16 01:00	0%	363h	A12120	A12300	2
297	A12290	GEShp	IP GE Shop Work: Dim Inspect Journal	556h	534h	18-Mar-16 21:00 A	11-Apr-16 13:00		549h			
298	"B" Coupling Section											

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#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
299	Disassembly			50h	28h	18-Mar-16 21:00 A	21-Mar-16 11:00		459h			
X 300	A10300	GE	Unbolt & Remove UH T4 and T5 Bearin	2h	1h	18-Mar-16 21:00 A	20-Mar-16 08:00	0%	67h	A10220	A10310	2
X 301	A10320	GE	Take "B" Coupling Axial and Radial Posit	2h	2h	18-Mar-16 23:00 A	20-Mar-16 09:00	0%	67h	A10310	A10230	2
X 302	A10230	GE	Take As Found "B" Coupling Run Out Cl	4h	4h	20-Mar-16 09:00	20-Mar-16 13:00	0%	67h	A10320	A10260	2
X 303	A10260	GE	Jack Shell to Remove Axial Thrust Keys	2h	2h	20-Mar-16 13:00	20-Mar-16 15:00	0%	67h	A10230	A10240	2
X 304	A10240	GE	Unbolt and Separate "B" Coupling (Jack	12h	12h	20-Mar-16 15:00	21-Mar-16 03:00	0%	67h	A10260	A10250	2
X 305	A10250	GE	As Found "B" Coupling Alignment Check	4h	4h	21-Mar-16 03:00	21-Mar-16 07:00	0%	67h	A10240	A10270	2
X 306	A10270	GE	Rotor Position Checks (Coupling Separ	2h	2h	21-Mar-16 07:00	21-Mar-16 09:00	0%	67h	A10250	A10080, A10190	2
X 307	A10190	GE	Unbolt and Remove LH T4 and T5 Bear	2h	2h	21-Mar-16 09:00	21-Mar-16 11:00	0%	459h	A10270	A9950, A9920, /	2
308	A17810		'B' Coupling Disassembly Complete	0h	0h		21-Mar-16 11:00	0%	459h	A10190	A10010, A9920,	
309	Clean & Inspect			30h	30h	20-Mar-16 07:00	21-Mar-16 13:00		669h			
310	Repairs & Non-Standard Work			506h	506h	21-Mar-16 11:00	11-Apr-16 13:00		501h			
311	Reassembly			12h	12h	20-Mar-16 07:00	20-Mar-16 19:00		1071h			
312	LP-A Section			140h	127h	18-Mar-16 23:00 A	25-Mar-16 14:00		54h			
313	"C" Coupling Section			553h	553h	20-Mar-16 07:00	12-Apr-16 08:00		480h			
314	LP-B Section			99h	75h	18-Mar-16 07:00 A	23-Mar-16 10:00		53h			
315	Disassembly			99h	75h	18-Mar-16 07:00 A	23-Mar-16 10:00		53h			
316	A10850	GE	Unbolt and Remove Cross-Over Piping	8h	8h	18-Mar-16 07:00 A	20-Mar-16 15:00	0%	61h	A10370, A9340	A10840, A10770	2
317	A10840	GE	Unbolt and Remove the LP-B Access C	2h	2h	20-Mar-16 23:00	21-Mar-16 01:00	0%	53h	A10850, A7550	A10830	2
318	A10830	GE	Measure LP-B Exhaust Hood Horizontal	2h	2h	21-Mar-16 01:00	21-Mar-16 03:00	0%	53h	A10840	A10770	2
319	A10770	GE	Unbolt, Rig and Remove Exhaust Hood	12h	12h	21-Mar-16 03:00	21-Mar-16 15:00	0%	53h	A10830, A10850	A10900, A10910	2
320	A10900	GE	Measure LP-B Exhaust Hood Horizontal	2h	2h	21-Mar-16 15:00	21-Mar-16 17:00	0%	65h	A10770	A10860	2
321	A10910	GE	Measure LP-B Inner Shell Horizontal Joi	2h	2h	21-Mar-16 15:00	21-Mar-16 17:00	0%	53h	A10770	A10780	2
322	A10860	GE	Install Scaffold / Decking for Upper Inner Shell Removal	4h	4h	21-Mar-16 17:00	21-Mar-16 21:00	0%	65h	A10770, A10900	A10880	2
323	A10780	GE	Unbolt and Remove Upper Inner Shell B	16h	16h	21-Mar-16 17:00	22-Mar-16 09:00	0%	53h	A10910, A10770	A10790, A10880	2
324	A10880	GE	Measure LP-B Inner Shell Horizontal Joi	2h	2h	22-Mar-16 09:00	22-Mar-16 11:00	0%	53h	A10860, A10780	A10870	2
325	A10870	GE	Rig and Remove Upper Inner Shell	6h	6h	22-Mar-16 11:00	22-Mar-16 17:00	0%	53h	A10880	A10890, A10790	2
326	A10890	GE	Remove Inner Shell Studs	5h	5h	22-Mar-16 17:00	22-Mar-16 22:00	0%	53h	A10870	A10790	2
327	A10790	GE	Remove UH Diaphragms and Packing C	12h	12h	22-Mar-16 22:00	23-Mar-16 10:00	0%	53h	A10890, A1087	A10920, A10940	2

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M116 SO Master Project		M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Unlited Filter)Cont				MNIP0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
328	"D" Coupling			553h	553h	20-Mar-16 07:00	12-Apr-16 08:00		480h			
329	LP-C Section			80h	80h	20-Mar-16 07:00	23-Mar-16 15:00		59h			
330	"E" Coupling			551h	551h	20-Mar-16 07:00	12-Apr-16 08:00		482h			
331	Valves			734h	603h	14-Mar-16 14:00 A	14-Apr-16 10:00		602h			
332	Main Stop Valves			705h	574h	14-Mar-16 14:00 A	13-Apr-16 05:00		631h			
333	Main Stop Valves #1			705h	574h	14-Mar-16 14:00 A	13-Apr-16 05:00		631h			
334	A5400	GE	Unbolt and Remove Upper Head	12h	2h	14-Mar-16 14:00 A	20-Mar-16 09:00	0%	631h	A5390	A5410	2
335	A5410	GE	Feeler Check The Upper Head Horizontl	1h	1h	20-Mar-16 09:00	20-Mar-16 10:00	0%	631h	A5400	A5420	2
336	A5420	GE	Rig and Remove Coarse Strainer	2h	2h	20-Mar-16 10:00	20-Mar-16 12:00	0%	631h	A5410	A5430	2
337	A5430	GE	Check CEOT Dimensions Before Disas:	1h	1h	20-Mar-16 12:00	20-Mar-16 13:00	0%	631h	A5420	A5440	2
338	A5440	GE	Disassemble Pressure Seal Head and C	1h	1h	20-Mar-16 13:00	20-Mar-16 14:00	0%	631h	A5430	A5450	2
339	A5450	GE	Check CEOT Dimensions After Disasse	1h	1h	20-Mar-16 14:00	20-Mar-16 15:00	0%	631h	A5440	A5460	2
340	A5460	GE	Rig and Remove Valve Assembly	2h	2h	20-Mar-16 15:00	20-Mar-16 17:00	0%	631h	A5450	A5470	2
341	A5470	GE	Unbolt and Remove Valve Actuators	48h	48h	20-Mar-16 17:00	22-Mar-16 17:00	0%	631h	A5460	A5480, A5510	2
342	A5480	GE	FME Valve Casing	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	843h	A5470	A5490	2
343	A5510	Shpng	Prep/Ship Valve Actuators	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	631h	A5470	A5320	2
344	A5490	GE	Measure PSIH Bore / Valve	2h	2h	23-Mar-16 05:00	23-Mar-16 07:00	0%	843h	A5480	A5500	2
345	A5320	Orbit	Repair Actuator (FE Vendor)	504h	504h	23-Mar-16 05:00	13-Apr-16 05:00	0%	631h	A5510	A5370	2
346	A5500	GE	Measure Gasket Fits and Upper Head E	6h	6h	23-Mar-16 07:00	23-Mar-16 13:00	0%	843h	A5490	A5330	2
347	Main Stop Valves #2			705h	574h	14-Mar-16 14:00 A	13-Apr-16 05:00		631h			
348	A5130	GE	Unbolt and Remove Upper Head	12h	2h	14-Mar-16 14:00 A	20-Mar-16 09:00	0%	579h	A5120	A5140	2
349	A5140	GE	Feeler Check The Upper Head Horizontl	1h	1h	20-Mar-16 09:00	20-Mar-16 10:00	0%	579h	A5130	A5150	2
350	A5150	GE	Rig and Remove Coarse Strainer	2h	2h	20-Mar-16 10:00	20-Mar-16 12:00	0%	579h	A5140	A5160	2
351	A5160	GE	Check CEOT Dimensions Before Disas:	1h	1h	20-Mar-16 12:00	20-Mar-16 13:00	0%	579h	A5150	A5170	2
352	A5170	GE	Disassemble Pressure Seal Head and C	1h	1h	20-Mar-16 13:00	20-Mar-16 14:00	0%	579h	A5160	A5180	2
353	A5180	GE	Check CEOT Dimensions After Disasse	1h	1h	20-Mar-16 14:00	20-Mar-16 15:00	0%	579h	A5170	A5190	2
354	A5190	GE	Rig and Remove Valve Assembly	2h	2h	20-Mar-16 15:00	20-Mar-16 17:00	0%	579h	A5180	A5200	2
355	A5200	GE	Unbolt and Remove Valve Actuators	48h	48h	20-Mar-16 17:00	22-Mar-16 17:00	0%	579h	A5190	A5240, A5210	2
356	A5240	Shpng	Prep/Ship Valve Actuators	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	579h	A5200	A4770	2
357	A5210	GE	FME Valve Casing	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	807h	A5200	A5220	2

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M116 SO Master Project		M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
358	A5220	GE	Measure PSH Bore / Valve	2h	2h	23-Mar-16 05:00	23-Mar-16 07:00	0%	807h	A5210	A5230	2
359	A4770	Orbit	Repair Actuator (FE Vendor)	504h	504h	23-Mar-16 05:00	13-Apr-16 05:00	0%	579h	A5240	A4820	2
360	A5230	GE	Measure Gasket Fits and Upper Head E	6h	6h	23-Mar-16 07:00	23-Mar-16 13:00	0%	807h	A5220	A4780	2
361	Main Stop Valves #3			709h	574h	14-Mar-16 14:00 A	13-Apr-16 05:00		591h			
362	A5840	GE	Unbolt and Remove Upper Head	12h	2h	14-Mar-16 14:00 A	20-Mar-16 09:00	0%	591h	A5830	A5850	2
363	A5850	GE	Feeler Check The Upper Head Horizontal	1h	1h	20-Mar-16 09:00	20-Mar-16 10:00	0%	591h	A5840	A5860	2
364	A5860	GE	Rig and Remove Coarse Strainer	2h	2h	20-Mar-16 10:00	20-Mar-16 12:00	0%	591h	A5850	A5870	2
365	A5870	GE	Check CEOT Dimensions Before Disassemble	1h	1h	20-Mar-16 12:00	20-Mar-16 13:00	0%	591h	A5860	A5880	2
366	A5880	GE	Disassemble Pressure Seal Head and C	1h	1h	20-Mar-16 13:00	20-Mar-16 14:00	0%	591h	A5870	A5890	2
367	A5890	GE	Check CEOT Dimensions After Disassemble	1h	1h	20-Mar-16 14:00	20-Mar-16 15:00	0%	591h	A5880	A5900	2
368	A5900	GE	Rig and Remove Valve Assembly	2h	2h	20-Mar-16 15:00	20-Mar-16 17:00	0%	591h	A5890	A5910	2
369	A5910	GE	Unbolt and Remove Valve Actuators	48h	48h	20-Mar-16 17:00	22-Mar-16 17:00	0%	591h	A5900	A5920, A6180	2
370	A5920	GE	FME Valve Casing	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	823h	A5910	A5930	2
371	A6180	Shpng	Prep/Ship Valve Actuators	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	591h	A5910	A6190	2
372	A5930	GE	Measure PSH Bore / Valve	2h	2h	23-Mar-16 05:00	23-Mar-16 07:00	0%	823h	A5920	A6170	2
373	A6190	Orbit	Repair Actuator (FE Vendor)	504h	504h	23-Mar-16 05:00	13-Apr-16 05:00	0%	591h	A6180	A5970	2
374	A6170	GE	Measure Gasket Fits and Upper Head E	6h	6h	23-Mar-16 07:00	23-Mar-16 13:00	0%	823h	A5930	A6200	2
375	Main Stop Valves #4			709h	574h	14-Mar-16 14:00 A	13-Apr-16 05:00		631h			
376	A3330	GE	Unbolt and Remove Upper Head	12h	2h	14-Mar-16 14:00 A	20-Mar-16 09:00	0%	631h	A3320	A3340	2
377	A3340	GE	Feeler Check The Upper Head Horizontal	1h	1h	20-Mar-16 09:00	20-Mar-16 10:00	0%	631h	A3330	A3350	2
378	A3350	GE	Rig and Remove Coarse Strainer	2h	2h	20-Mar-16 10:00	20-Mar-16 12:00	0%	631h	A3340	A3360	2
379	A3360	GE	Check CEOT Dimensions Before Disassemble	1h	1h	20-Mar-16 12:00	20-Mar-16 13:00	0%	631h	A3350	A3370	2
380	A3370	GE	Disassemble Pressure Seal Head and C	1h	1h	20-Mar-16 13:00	20-Mar-16 14:00	0%	631h	A3360	A3380	2
381	A3380	GE	Check CEOT Dimensions After Disassemble	1h	1h	20-Mar-16 14:00	20-Mar-16 15:00	0%	631h	A3370	A3390	2
382	A3390	GE	Rig and Remove Valve Assembly	2h	2h	20-Mar-16 15:00	20-Mar-16 17:00	0%	631h	A3380	A3400	2
383	A3400	GE	Unbolt and Remove Valve Actuators	48h	48h	20-Mar-16 17:00	22-Mar-16 17:00	0%	631h	A3390	A3440, A3410	2
384	A3410	GE	FME Valve Casing	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	835h	A3400	A3420	2
385	A3440	Shpng	Prep/Ship Valve Actuators	12h	12h	22-Mar-16 17:00	23-Mar-16 05:00	0%	631h	A3400	A3450	2
386	A3420	GE	Measure PSH Bore / Valve	2h	2h	23-Mar-16 05:00	23-Mar-16 07:00	0%	835h	A3410	A3430	2
387	A3450	Orbit	Repair Actuator (FE Vendor)	504h	504h	23-Mar-16 05:00	13-Apr-16 05:00	0%	631h	A3440	A3490	2

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M116 SO Master Project				M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont		MN1P0002		Page: 77		Data Date 20-Mar-16 0700	
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk	
388	A3430	GE	Measure Gasket Fits and Upper Head E	6h	6h	23-Mar-16 07:00	23-Mar-16 13:00	0%	835h	A3420	A3460	2	
389	Control Valves			603h	603h	20-Mar-16 07:00	14-Apr-16 10:00		529h				
390	Combined Reheat Valve/Intercept Valve			92h	92h	20-Mar-16 07:00	24-Mar-16 03:00		604h				
391	Miscellaneous Valves			336h	306h	16-Mar-16 09:00 A	02-Apr-16 01:00		791h				
392	Cooling Tower			303h	80h	11-Mar-16 00:00 A	23-Mar-16 15:00		888h				
393	Warm Water By-Pass			303h	80h	11-Mar-16 00:00 A	23-Mar-16 15:00		888h				
394	A1150	McCrI	Drain & Clean Cooling Tower (Owner)	110h	24h	11-Mar-16 00:00 A	21-Mar-16 07:00	78.18%	48h	A1000	A2520, A2510	2	
395	Demo WWBP Piping			32h	24h	18-Mar-16 07:00 A	21-Mar-16 15:00		216h				
396	Block 3 Demo			32h	24h	18-Mar-16 07:00 A	21-Mar-16 15:00		216h				
397	A1130	McCrI	Demo Valve Enclosure Structural Frame	8h	8h	18-Mar-16 07:00 A	21-Mar-16 15:00	0%	224h	A1120	A1140	2	
398	A2510	McCrI	Remove Concrete Encasement	24h	24h	21-Mar-16 07:00	23-Mar-16 15:00	0%	16h	A1150	A1170	2	
399	A1140	McCrI	Demo Valve Enclosure Floor & Grating	8h	8h	22-Mar-16 07:00	22-Mar-16 15:00	0%	224h	A1130	A2610	2	
400	A1170	McCrI	Remove Valve	16h	16h	22-Mar-16 07:00	23-Mar-16 15:00	0%	16h	A2510	A1180	2	
401	Block 4 Demo			24h	24h	21-Mar-16 07:00	21-Mar-16 15:00		232h				
402	A1250	McCrI	Demo Valve Enclosure Floor & Grating	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	232h	A1240	A2730	2	
403	A2520	McCrI	Demo Concrete Encasement	24h	24h	21-Mar-16 07:00	23-Mar-16 15:00	0%	16h	A1150	A2530	2	
404	A2530	McCrI	Remove Valve	16h	16h	22-Mar-16 07:00	23-Mar-16 15:00	0%	16h	A2520	A2540	2	
405	Generator Section			131h	79h	16-Mar-16 16:00 A	23-Mar-16 14:00		1169h				
406	Disassembly			79h	79h	20-Mar-16 07:00	23-Mar-16 14:00		906h				
407	A14920	GE	Unbolt and Remove "F" Coupling Guard	2h	2h	20-Mar-16 07:00	20-Mar-16 09:00	0%	30h	A14900	A14930	2	
408	A15000	GE	Unbolt and Remove Generator Brush Ri	4h	4h	20-Mar-16 07:00	20-Mar-16 11:00	0%	595h	A14900	A14810, A14911	2	
409	A14880	GE	Remove Generator Lagging	8h	8h	20-Mar-16 07:00	20-Mar-16 15:00	0%	977h	A10380	A13820	2	
410	A14930	GE	Gen: Take "F" Coupling Run Outs	2h	2h	20-Mar-16 09:00	20-Mar-16 11:00	0%	30h	A14920	A14940	2	
411	A14910	GE	Unbolt and Remove Bushing Box Acces	4h	4h	20-Mar-16 11:00	20-Mar-16 15:00	0%	595h	A15000	A14800	2	
412	A14940	GE	Unbolt "F" Coupling and Separate	4h	4h	20-Mar-16 11:00	20-Mar-16 15:00	0%	30h	A14930	A15010	2	
413	A15010	GE	Take "F" Coupling 16 Point Coupling Ch	8h	8h	20-Mar-16 15:00	20-Mar-16 23:00	0%	30h	A14940	A14710, A15021	2	
414	A15030	GE	Unbolt and Remove T11 UH Outer Oil D	2h	2h	20-Mar-16 23:00	21-Mar-16 01:00	0%	36h	A15010	A15040	2	
415	A15020	GE	Unbolt and Remove the Generator Acce	4h	4h	20-Mar-16 23:00	21-Mar-16 03:00	0%	30h	A15010	A14790, A15160	2	
416	A15040	GE	Pinch Check As Found Bearing Cap to E	2h	2h	21-Mar-16 01:00	21-Mar-16 03:00	0%	36h	A15030	A14950	2	
417	A15160	GE	Unbolt and Remove the Generator Acce	4h	4h	21-Mar-16 03:00	21-Mar-16 07:00	0%	30h	A15020	A14790, A15190	2	

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M116 SO Master Project		M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MNIP0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
✓ 418	A14950	I&T	Have FE Technicians Unwire T11 Bearir	10h	10h	21-Mar-16 03:00	21-Mar-16 13:00	0%	36h	A15040	A14960	2
X 419	A15190	GE	Unbolt and Remove T12 UH Outer Oil C	2h	2h	21-Mar-16 07:00	21-Mar-16 09:00	0%	30h	A15160	A14780, A15170	2
X 420	A15170	GE	Pinch Check As Found Bearing Cap to E	1h	1h	21-Mar-16 09:00	21-Mar-16 10:00	0%	30h	A15190	A15180	2
✓ 421	A15180	I&T	Have FE Technicians Unwire T12 Bearir	2h	2h	21-Mar-16 10:00	21-Mar-16 12:00	0%	30h	A15170	A15240	2
X 422	A15240	GE	Unbolt and Remove UH T12 Bearing	1h	1h	21-Mar-16 12:00	21-Mar-16 13:00	0%	30h	A15180	A15250	2
X 423	A14960	GE	Unbolt and Remove UH T11 Bearing	2h	2h	21-Mar-16 13:00	21-Mar-16 15:00	0%	30h	A15240	A14990	2
X 424	A15250	GE	Unbolt and Remove UH Hydrogen Seal	2h	2h	21-Mar-16 14:00	21-Mar-16 16:00	0%	36h	A14960	A14970	2
X 425	A14990	GE	Unbolt and Remove UH TE H2 Seal	2h	2h	21-Mar-16 15:00	21-Mar-16 17:00	0%	30h	A15250	A15270	2
X 426	A15260	GE	Unbolt and Remove UH T12 Inner Oil D	2h	2h	21-Mar-16 16:00	21-Mar-16 18:00	0%	36h	A14990	A15280	2
X 427	A14970	GE	Unbolt and Remove UH T11 Inner Oil D	1h	1h	21-Mar-16 17:00	21-Mar-16 18:00	0%	30h	A15270	A14980	2
X 428	A15270	GE	Take Fan Blade Tip Clearances CE	1h	1h	21-Mar-16 18:00	21-Mar-16 19:00	0%	36h	A15280	A15070	2
X 429	A14980	GE	Take Fan Blade Tip Clearances TE	4h	4h	21-Mar-16 18:00	21-Mar-16 22:00	0%	30h	A15270	A15290	2
X 430	A15280	GE	Unbolt and Remove the Fan Blades CE	4h	4h	21-Mar-16 19:00	21-Mar-16 23:00	0%	36h	A14980	A14760, A15080	2
X 431	A15070	GE	Unbolt and Remove the Fan Blades TE	10h	10h	21-Mar-16 22:00	22-Mar-16 08:00	0%	30h	A15280	A15300, A14780	2
X 432	A15290	GE	Unbolt and Remove LH T12 Outer Oil D	2h	2h	21-Mar-16 23:00	22-Mar-16 01:00	0%	36h	A15070	A15090	2
X 433	A15080	GE	Unbolt and Remove LH T11 Outer Oil D	4h	4h	22-Mar-16 03:00	22-Mar-16 07:00	0%	36h	A15080	A15100	2
X 434	A15090	GE	Install TE Jacking Fixture	6h	6h	22-Mar-16 07:00	22-Mar-16 13:00	0%	36h	A15090	A15110	2
X 435	A15100	GE	Take Rotor Positions on TE Generator	2h	2h	22-Mar-16 08:00	22-Mar-16 10:00	0%	30h	A15100	A15120	2
X 436	A15110	GE	Jack Up Generator Field on TE	1h	1h	22-Mar-16 10:00	22-Mar-16 11:00	0%	30h	A15290	A15310	2
X 437	A15300	GE	Install CE Jacking Fixture	2h	2h	22-Mar-16 11:00	22-Mar-16 13:00	0%	30h	A15300	A15330	2
X 438	A15310	GE	Take Rotor Positions on CE Generator	4h	4h	22-Mar-16 13:00	22-Mar-16 17:00	0%	30h	A15310	A15340	2
X 439	A15330	GE	Jack Up Generator Field on CE	7h	7h	22-Mar-16 13:00	22-Mar-16 20:00	0%	36h	A15110	A14840, A14830	2
X 440	A15340	GE	Remove LH T12 Bearing, H2 Seal and Ir	4h	4h	22-Mar-16 17:00	22-Mar-16 21:00	0%	30h	A15340	A14700, A15410	2
X 441	A15120	GE	Remove LH T11 Bearing, H2 Seal and Ir	2h	2h	22-Mar-16 20:00	22-Mar-16 22:00	0%	38h	A15120	A15210	2
X 442	A15320	GE	Unbolt, Rig and Remove the UH Outer E	4h	4h	22-Mar-16 20:00	23-Mar-16 00:00	0%	36h	A15120	A14690, A15210	2
X 443	A15130	GE	Unbolt and Remove the Inner End Shiek	2h	2h	22-Mar-16 21:00	22-Mar-16 23:00	0%	30h	A15340, A15350	A15410	2
X 444	A15140	GE	Unbolt, Rig and Remove the UH Outer E	2h	2h	22-Mar-16 23:00	23-Mar-16 01:00	0%	30h	A15320, A15350	A14790, A15400	2
X 445	A15350	GE	Unbolt and Remove the Inner End Shiek	2h	2h	23-Mar-16 00:00	23-Mar-16 02:00	0%	36h	A15130, A15140	A14790, A15220	2
X 446	A15410	GE	Unbolt and Remove the Lower Generat	2h	2h							
X 447	A15210	GE	Unbolt and Remove the Lower Generat	2h	2h							

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M116 SO Master Project			M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont			MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
448	A15400	GE	Unbolt and Remove Fan Blades CE	7h	7h	23-Mar-16 01:00	23-Mar-16 08:00	0%	30h	A15410	A14760, A15360	2
449	A15220	GE	Unbolt Fan Nozzle Ring and Hang on TE	4h	4h	23-Mar-16 02:00	23-Mar-16 06:00	0%	36h	A15210	A15230, A15200	2
450	A15230	GE	Unbolt UH and LH Inner End Shields and	8h	8h	23-Mar-16 06:00	23-Mar-16 14:00	0%	36h	A15220	A14680, A15201	2
451	Repairs & Non-Standard Work			128h	76h	16-Mar-16 16:00 A	23-Mar-16 11:00		1172h			
452	A13860	GE	HIT Skid Test Generator Stator	120h	60h	16-Mar-16 16:00 A	22-Mar-16 19:00	0%	1172h	A13850	A13870	2
453	A13820	GE	Install and Torque Generator Trunnions	12h	12h	20-Mar-16 15:00	21-Mar-16 03:00	0%	977h	A14880	A16540	2
454	A13870	GE	Disconnect HIT Skid and Restore Piping	16h	16h	22-Mar-16 19:00	23-Mar-16 11:00	0%	1172h	A13860	A14640	2
455	Exciter Section Alterex			78h	58h	10-Mar-16 09:00 A	22-Mar-16 17:00		941h			
456	System and Auxiliaries			84h	84h	20-Mar-16 07:00	23-Mar-16 19:00		1143h			
457	Electrical			40h	40h	21-Mar-16 07:00	25-Mar-16 15:00		392h			
458	Electrical SO2			40h	40h	21-Mar-16 07:00	25-Mar-16 15:00		392h			
459	101444446_	Elect	M116 SCR - MN ELECT SUPPORT	40h	40h	21-Mar-16 07:00*	25-Mar-16 15:00	0%	392h		SMF	2
460	Electrical Turbine/Generator			40h	40h	21-Mar-16 07:00	25-Mar-16 15:00		392h			
461	101440002_	Elect	REMOVE GSU & AUX XFRMR LINKS	40h	40h	21-Mar-16 07:00*	25-Mar-16 15:00	0%	392h	SM1	SMF	2
462	Electrical Temp Power & Light			8h	8h	21-Mar-16 07:00	21-Mar-16 15:00		56h			
463	101447362_	Elect	M116 BOTTOM ASH OVERHAUL - TEN	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	56h	SM2	SM3	2
464	101419273_	Elect	M116 LOWER ECONOMIZER TEMPOF	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	56h	SM2	SM3	2
465	101425150_	Elect	M116 INTERNAL BOILER TEMP POWE	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	56h	SM2	SM3	2
466	101419267_	Elect	M116 AIR HEATER TEMP POWER SUF	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	56h	SM2	SM3	2
467	101419272_	Elect	M116 WATERWALLTEMP POWER SUF	8h	8h	21-Mar-16 07:00	21-Mar-16 15:00	0%	56h	SM2	SM3	2
468	Air Quality Control			1075h	1047h	15-Mar-16 07:00 A	02-May-16 22:00		272h			
469	SCR			730h	735h	18-Mar-16 07:00 A	02-May-16 22:00		46h			
470	SCR Catalyst			730h	735h	18-Mar-16 07:00 A	02-May-16 22:00		45h			
471	Catalyst Level 1			115h	65h	18-Mar-16 07:00 A	24-Mar-16 12:00		45h			
472	L11020	Ener	REMOVE CATALYST LEVEL #1 52 OF :	35h	30h	18-Mar-16 07:00 A	22-Mar-16 17:00	14.29%	45h	SCR1020, L110	SCR1070, L411	2
473	L41140	Ener	REMOVE CATALYST LEVEL #1 104 OF	35h	35h	22-Mar-16 17:00	24-Mar-16 12:00	0%	45h	L11020	L41150	2
474	Catalyst Level 3			115h	65h	18-Mar-16 07:00 A	24-Mar-16 12:00		45h			
475	L31020	Ener	REMOVE CATALYST LEVEL #3 52 OF :	35h	30h	18-Mar-16 07:00 A	22-Mar-16 17:00	14.29%	45h	L31010, 1052	L41260, M1161	2
476	L41260	Ener	REMOVE CATALYST LEVEL #3 104 OF	35h	35h	22-Mar-16 17:00	24-Mar-16 12:00	0%	45h	L31020, M1161	L41270	2

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M116 SO Master Project		M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
477	Catalyst Common			720h	720h	18-Mar-16 07:00 A	02-May-16 22:00		45h			
478	SCR1070	Ener	LOAD AND UNLOAD CATALYST TRUC	720h	735h	18-Mar-16 07:00 A	02-May-16 22:00	0%	45h	L11020	L41250	1
479	SO2			466h	346h	15-Mar-16 07:00 A	03-Apr-16 17:00		973h			
480	SO2 General			466h	346h	15-Mar-16 07:00 A	03-Apr-16 17:00		973h			
481	SO2 Train			466h	346h	15-Mar-16 07:00 A	03-Apr-16 17:00		973h			
482	"A" Train			166h	128h	18-Mar-16 07:00 A	25-Mar-16 15:00		1007h			
483	"A" Scrubber			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		336h			
484	SO6110	ENGR	Inspect ME's and Lower Coating	12h	12h	20-Mar-16 07:00	20-Mar-16 19:00	0%	132h	SO6100, SM1	SO6250, SO61:	2
485	SO5910	SO2 M	Remove Tangential Nozzles & Hoses	16h	16h	20-Mar-16 07:00	20-Mar-16 23:00	0%	392h	SO5900	SO5950, SO59:	2
486	SO5960	Ener	Cut Open, Clean Out Plumbob	20h	20h	21-Mar-16 07:00	22-Mar-16 03:00	0%	280h	SO5900, SO59	SO5950, SO64:	2
487	SO6120	MultiCr	Lower Scrubber Internal Repairs	40h	40h	21-Mar-16 07:00	25-Mar-16 15:00	0%	72h	SO6110	SO6130, SO60:	2
488	SO5950	Ener	Hose Dome for Coating Inspection	4h	4h	22-Mar-16 07:00	22-Mar-16 11:00	0%	280h	SO5910, SO59	SO5970	2
489	SO5970	ENGR	Inspect Dorne Coating	4h	4h	22-Mar-16 11:00	22-Mar-16 15:00	0%	96h	SO5950	SO5920, SO64:	2
490	SO5920	MPW	40K Center Cone Manifold, Plumbob Shr	12h	12h	22-Mar-16 15:00	23-Mar-16 03:00	0%	392h	SO5970	DWF-40, SO59	2
491	SO5930	FQS	NDE Plumbob Shaft	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	100h	SO5920, SO60	SO6450, SO59:	2
492	"A" Train Duct Coating			20h	20h	21-Mar-16 07:00	22-Mar-16 03:00		236h			
493	SO6300	Ener	Remove Scrubber O/L Duct Expansion	20h	20h	21-Mar-16 07:00	22-Mar-16 03:00	0%	236h	SO6260	SO6280	2
494	"A" ID Fan			125h	63h	16-Mar-16 07:00 A	23-Mar-16 22:00		303h			
495	SO6190	Brand	Scaffold for "A" ID Fan & Discharge Duct	50h	15h	16-Mar-16 07:00 A	22-Mar-16 22:00	70%	145h	SO6200	SO6210, SO62:	2
496	SO6360	Aval	Sandblast "" ID Fan	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	246h	SO5790, SO64	SO5770	3
497	SO5770	FQS	Initial NDE ID Fan Rotor (Start of Weld F	10h	10h	21-Mar-16 17:00	22-Mar-16 03:00	0%	246h	SO6360, SO57	SO5780, SO67:	2
498	SO6210	Brand	Install Fan Housing Bulkheads	20h	20h	22-Mar-16 22:00	23-Mar-16 22:00	0%	201h	SO6200, SO61	SO5780, SO62:	2
499	"A" Absorber			24h	24h	21-Mar-16 07:00	22-Mar-16 07:00		1087h			
500	SO6180	Ener	Clean Absorber Bullring and Outlet Duct	12h	12h	21-Mar-16 07:00	21-Mar-16 19:00	0%	1087h	SO5870, SO57	SO6160	2
501	SO6170	Ener	Clean Absorber Belly	12h	12h	21-Mar-16 19:00	22-Mar-16 07:00	0%	1087h	SO6160	SO5840, SO49:	2
502	"B" Train			248h	123h	15-Mar-16 07:00 A	25-Mar-16 15:00		1188h			
503	"B" Scrubber			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		1188h			
504	SO4860	ENGR	Inspect ME's and Lower Coating	12h	12h	20-Mar-16 07:00	20-Mar-16 19:00	0%	126h	SO4850, SM1	SO5810, SO48:	2
505	SO4660	SO2 M	Remove Tangential Nozzles & Hoses	16h	16h	20-Mar-16 07:00	20-Mar-16 23:00	0%	392h	SO4650	SO4710, SO47:	2
506	SO4710	Ener	Cut Open, Clean Out Plumbob	20h	20h	21-Mar-16 07:00	22-Mar-16 03:00	0%	280h	SO4650, SO46	SO4700, SO65:	2

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M116 SO Master Project			M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont			MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
507	SO4870	MultiCr	Lower Scrubber Internal Repairs	40h	40h	21-Mar-16 07:00	25-Mar-16 15:00	0%	70h	SO4860	SO4880, SO47	2
508	SO4700	Ener	Hose Dome for Coating Inspection	4h	4h	22-Mar-16 07:00	22-Mar-16 11:00	0%	280h	SO4710, SO46	SO4720	2
509	SO4720	ENGR	Inspect Dome Coating	4h	4h	22-Mar-16 11:00	22-Mar-16 15:00	0%	96h	SO4700, SO48	SO4670, SO65	2
510	SO4670	MPW	40K Center Cone Manifold, Plumbob Sh	12h	12h	22-Mar-16 15:00	23-Mar-16 03:00	0%	392h	SO4720	DWF-50, SO46	2
511	SO4680	FQS	NDE Plumbob Shaft	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	100h	SO4670	SO6500, SO46	2
512	"B" Train Duct Coating			20h	20h	21-Mar-16 07:00	22-Mar-16 03:00		920h			
513	SO5025	Ener	Remove Scrubber O/L Duct Expansion	20h	20h	21-Mar-16 07:00	22-Mar-16 03:00	0%	920h	SO5010		2
514	"B" ID Fan			226h	53h	16-Mar-16 07:00 A	23-Mar-16 12:00		313h			
515	SO1026	Ener	Remove "B" ID Fan Expansion Joints 2	20h	10h	15-Mar-16 07:00 A	21-Mar-16 17:00	50%	170h	SM0, SO6200	SO1025, SO58	2
516	SO1025	Brand	Scaffold for "B" ID Fan & Discharge Duct	50h	10h	16-Mar-16 07:00 A	23-Mar-16 12:00	80%	145h	SO1026, SO61	SO1027	2
517	SO4545	Aval	Sandblast "B" ID Fan	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	246h	SO4540, SO63	SO4520	3
518	SO4520	FQS	Initial NDE ID Fan Rotor (Start of Weld F	10h	10h	21-Mar-16 17:00	22-Mar-16 03:00	0%	246h	SO4540, SO45	SO4530, SO67	2
519	"B" Absorber			24h	24h	22-Mar-16 07:00	23-Mar-16 07:00		1087h			
520	SO4930	Ener	Clean Absorber Bullring and Outlet Duct	12h	12h	22-Mar-16 07:00	22-Mar-16 19:00	0%	1087h	SO4490, SO46	SO4910	2
521	SO4920	Ener	Clean Absorber Belly	12h	12h	22-Mar-16 19:00	23-Mar-16 07:00	0%	1087h	SO4910	SO4590, SO44	2
522	"C" Train			346h	126h	20-Mar-16 07:00	03-Apr-16 17:00		325h			
523	"C" Scrubber			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		768h			
524	SO4280	ENGR	Inspect ME's and Lower Coating	12h	12h	20-Mar-16 07:00	20-Mar-16 19:00	0%	348h	SO4270, SM1	SO4290	2
525	SO4190	SO2 M	Remove Tangential Nozzles & Hoses	16h	16h	20-Mar-16 07:00	20-Mar-16 23:00	0%	536h	SO4180	SO4430, SO42	2
526	SO4430	Ener	Cut Open, Clean Out Plumbob	20h	20h	21-Mar-16 07:00	22-Mar-16 03:00	0%	380h	SO4190, SO41	SO6550, SO42	2
527	SO4290	MultiCr	Lower Scrubber Internal Repairs	40h	40h	21-Mar-16 07:00	25-Mar-16 15:00	0%	168h	SO4280	SO4300	2
528	SO4230	Ener	Hose Dome for Coating Inspection	4h	4h	22-Mar-16 07:00	22-Mar-16 11:00	0%	380h	SO4190, SO44	SO4330	2
529	SO4330	ENGR	Inspect Dome Coating	4h	4h	22-Mar-16 11:00	22-Mar-16 15:00	0%	128h	SO4230	SO4200, SO65	2
530	SO4200	MPW	40K Center Cone Manifold, Plumbob Sh	12h	12h	22-Mar-16 15:00	23-Mar-16 03:00	0%	538h	SO4330	SO4210, DWF-	2
531	SO4210	FQS	NDE Plumbob Shaft	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	196h	SO4200	SO4220, SO65	2
532	"C" ID Fan			322h	322h	21-Mar-16 07:00	03-Apr-16 17:00		24h			
533	SO4040	FQS	Initial NDE ID Fan Rotor (Start of Weld F	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	10h	SO6400	SO4050	2
534	SO4050	Mobile	Mobe for ID Fan Rotor Weld Repairs	10h	10h	22-Mar-16 07:00	22-Mar-16 17:00	0%	10h	SO4040, SM2	SO4060, SO67	2
535	SO6790	Start M	"C" ID Fan Weld Repair Start	0h	0h	22-Mar-16 17:00		0%	38h	SO4050	SO4060	2
536	SO4060	Mobile	ID Fan Rotor/Louver Repairs Per NDE f	120h	120h	23-Mar-16 07:00	03-Apr-16 17:00	0%	10h	SO4050, SO67	SO3090, SO40	2

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M116 SO Master Project			M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont			MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
537	"C" Absorber			12h	12h	23-Mar-16 07:00	23-Mar-16 19:00		1087h			
538	SO4440	Ener	Clean Absorber Bullring and Outlet Duct	12h	12h	23-Mar-16 07:00	23-Mar-16 19:00	0%	1087h	SO4150, SO40	SO4450	2
539	"D" Train			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		840h			
540	"D" Scrubber			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		840h			
541	SO3320	ENGR	Inspect ME's and Lower Coating	12h	12h	20-Mar-16 07:00	20-Mar-16 19:00	0%	384h	SO3310, SM1	SO3330	2
542	SO3230	SO2 M	Remove Tangential Nozzles & Hoses	16h	16h	20-Mar-16 07:00	20-Mar-16 23:00	0%	632h	SO3220	SO3270, SO34	2
543	SO3470	Ener	Cut Open, Clean Out Plumbob	20h	20h	21-Mar-16 07:00	22-Mar-16 03:00	0%	460h	SO3220, SO32	SO6600, SO32	2
544	SO3330	MultiCr	Lower Scrubber Internal Repairs	40h	40h	21-Mar-16 07:00	25-Mar-16 15:00	0%	192h	SO3320	SO3340	2
545	SO3270	Ener	Hose Dome for Coating Inspection	4h	4h	22-Mar-16 07:00	22-Mar-16 11:00	0%	460h	SO3230, SO34	SO3370	2
546	SO3370	ENGR	Inspect Dome Coating	4h	4h	22-Mar-16 11:00	22-Mar-16 15:00	0%	152h	SO3270	SO6600, SO32	2
547	SO3240	MPW	40K Center Cone Manifold, Plumbob Shr	12h	12h	22-Mar-16 15:00	23-Mar-16 03:00	0%	658h	SO3370	DWF-70, SO32	2
548	SO3250	FQS	NDE Plumbob Shaft	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	220h	SO3240	SO6600, SO32	2
549	"D" ID Fan			10h	10h	21-Mar-16 07:00	21-Mar-16 17:00		240h			
550	SO3080	FQS	Initial NDE ID Fan Rotor (Start of Weld F	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	240h	SO6380	SO3090	2
551	"E" Train			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		816h			
552	"E" Scrubber			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		816h			
553	SO3770	SO2 M	Remove Ring Header Nozzles from Ves	8h	8h	20-Mar-16 07:00	20-Mar-16 15:00	0%	920h	SO3760	SO3780	2
554	SO3800	ENGR	Inspect ME's and Lower Coating	12h	12h	20-Mar-16 07:00	20-Mar-16 19:00	0%	384h	SO3790	SO3810	2
555	SO3780	MPW	10k Snake Ring Header Internal	12h	12h	20-Mar-16 15:00	21-Mar-16 03:00	0%	920h	SO3770	SO3850	2
556	SO3690	Ener	Install Plumbob Rigging	12h	12h	21-Mar-16 07:00	21-Mar-16 19:00	0%	628h	SO3680, SO37	SO3950	2
557	SO3710	SO2 M	Remove Tangential Nozzles & Hoses	16h	16h	21-Mar-16 07:00	21-Mar-16 23:00	0%	872h	SO3700	SO3750, SO39	2
558	SO3810	MultiCr	Lower Scrubber Internal Repairs	40h	40h	21-Mar-16 07:00	25-Mar-16 15:00	0%	192h	SO3800	SO3820	2
559	SO3950	Ener	Cut Open, Clean Out Plumbob	20h	20h	21-Mar-16 23:00	22-Mar-16 23:00	0%	624h	SO3710, SO37	SO6650, SO37	2
560	SO3750	Ener	Hose Dome for Coating Inspection	4h	4h	22-Mar-16 23:00	23-Mar-16 03:00	0%	624h	SO3710, SO39	SO3850	2
561	SO3850	ENGR	Inspect Dome Coating	4h	4h	23-Mar-16 07:00	23-Mar-16 11:00	0%	212h	SO3750, SO37	SO6650, SO37	2
562	"E" ID Fan			20h	20h	21-Mar-16 07:00	22-Mar-16 17:00		290h			
563	SO3560	Aval	Sandblast ID Fan Rotor	10h	10h	21-Mar-16 07:00	21-Mar-16 17:00	0%	290h	SO3550, SM2,	SO6440	3
564	SO6440	FQS	Initial NDE ID Fan Rotor (Start of Weld F	10h	10h	22-Mar-16 07:00	22-Mar-16 17:00	0%	290h	SO3560	SO3570	2
565	"F" Train			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		1191h			
566	"F" Scrubber			128h	128h	20-Mar-16 07:00	25-Mar-16 15:00		1191h			

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#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk
567	SO1310	SO2 M	Remove Ring Header Nozzles from Ves	8h	8h	20-Mar-16 07:00	20-Mar-16 15:00	0%	1299h	SO1300	SO1320	2
568	SO1340	ENGR	Inspect ME's and Lower Coating	12h	12h	20-Mar-16 07:00	20-Mar-16 19:00	0%	384h	SO1330, SO13	SO1350	2
569	SO1320	MPW	10k Snake Ring Header Internal	12h	12h	20-Mar-16 15:00	21-Mar-16 03:00	0%	1299h	SO1310		2
570	SO1350	MultiCr	Lower Scrubber Internal Repairs	40h	40h	21-Mar-16 07:00	25-Mar-16 15:00	0%	192h	SO1340	SO1360	2
571	SO2			332h	212h	16-Mar-16 07:00 A	30-Mar-16 03:00		994h			
572	Chimney Flue			200h	80h	16-Mar-16 07:00 A	24-Mar-16 15:00		1010h			
573	"A" Flue			200h	80h	16-Mar-16 07:00 A	24-Mar-16 15:00		1010h			
574	"A" Flue Mobe			200h	80h	16-Mar-16 07:00 A	24-Mar-16 15:00		1010h			
575	F1000	Aval	Avalotls Mobe For 1A & 1B Flue Cleanin	16h	16h	16-Mar-16 07:00 A	22-Mar-16 15:00	0%	185h	SM1	F1040, F1020, I	2
576	F1040	Aval	Install Dumpsters Bottom OF Flue	1h	1h	21-Mar-16 07:00	21-Mar-16 08:00	0%	271h	F1000	F1130	2
577	F1030	C&K	C&K Setup HP Water Equipment	20h	20h	22-Mar-16 15:00	24-Mar-16 15:00	0%	302h	F1000	F1130	2
578	F1020	Aval	Avalotls Setup Winch Bottom Of Chimne	8h	8h	23-Mar-16 07:00	23-Mar-16 15:00	0%	185h	F1010, F1000	F1060, F1170	2
579	"A" Reheat Horizontal Reheat Duct			30h	10h	17-Mar-16 07:00 A	21-Mar-16 17:00		756h			
580	F1330	Ener	Hose 1A Rht Chamber & Horz Duct	30h	10h	17-Mar-16 07:00 A	21-Mar-16 17:00	66.67%	756h	SM2	F1335, F1250	2
581	Thickener			303h	212h	17-Mar-16 07:00 A	30-Mar-16 03:00		994h			
582	Thickener Rake GAP High Lvl Overylew			303h	212h	17-Mar-16 07:00 A	30-Mar-16 03:00		994h			
583	Thickener Cleaning			308h	212h	17-Mar-16 07:00 A	30-Mar-16 03:00		994h			
584	TC10050	McCr	Demo Sever Influent Piping by Thickene	128h	120h	17-Mar-16 07:00 A	27-Mar-16 03:00	6.25%	746h	TC10020	OETM#14	2
585	TC10080	Ener	Move Equipment to Second Access Way	2h	2h	21-Mar-16 07:00	21-Mar-16 09:00	0%	838h	TC10060, A135	TC10070, TC10	2
586	TC1-25%	Ener	Thickener Hose Out Tank With U/F Pun	36h	36h	21-Mar-16 07:00	22-Mar-16 19:00	0%	181h	TC_100%, TC1	TC1-50%	2
587	TC10180	Ener	Thickener Hose Out Tank With U/F Pun	144h	144h	21-Mar-16 07:00	27-Mar-16 07:00	0%	181h	TC10170, A135	TC10160, TC1-	2
588	A1350	Ener	Clean Tank - Focus First on Under Brid	160h	160h	21-Mar-16 07:00*	30-Mar-16 03:00	0%	133h	MST-110	A1330, TC1018	2
589	TC10070	C&K	Cut Access Openings (2 of 2)	10h	10h	21-Mar-16 09:00	22-Mar-16 09:00	0%	348h	TC10080	TC10100	2
590	TC10100	Ener	Reinforce Both Openings with "C" Chan	10h	10h	22-Mar-16 09:00	22-Mar-16 19:00	0%	834h	TC10070, TC1	OETM#14	2
591	TC1-50%	Ener	Thickener Hose Out Tank With U/F Pun	36h	36h	22-Mar-16 19:00	24-Mar-16 07:00	0%	181h	TC1-25%	TC1-75%	2
592	Thickener Support Install			20h	20h	23-Mar-16 07:00	23-Mar-16 17:00		60h			
593	T110	Service	EQUIP AND HOIST SET UP AT TUNNE	20h	20h	22-Mar-16 07:00	23-Mar-16 17:00	0%	60h	T100	T120	2
594	Thickener Demo			10h	10h	22-Mar-16 07:00	22-Mar-16 17:00		219h			
595	A1360	Yates	Disconnect Electrical from Bridge, Remc	10h	10h	22-Mar-16 07:00	22-Mar-16 17:00	0%	219h	SM2, MST-110	A1390, A1370	2
596	Dewatering Facility Tie In			24h	24h	23-Mar-16 07:00	25-Mar-16 15:00		134h			

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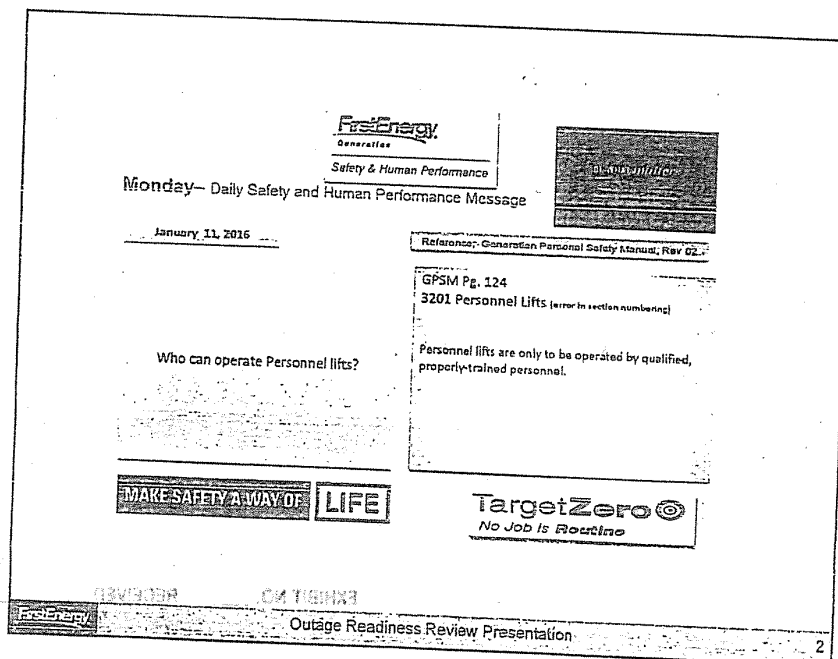
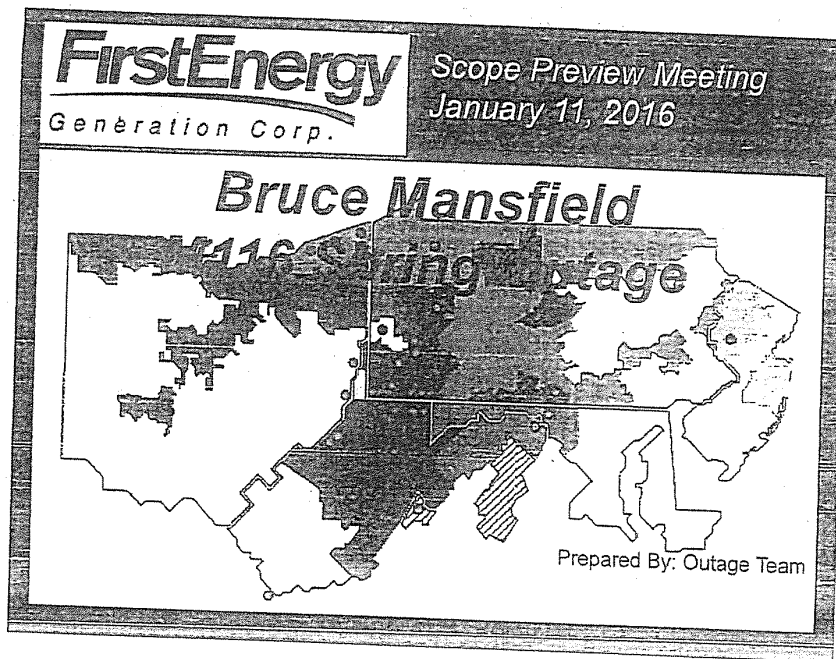
M116 SO Master Project			M116 Meeting 3D-8x11		TASK filters: % Complete < 100%, (A-Untitled Filter)Cont				MN1P0002		Data Date 20-Mar-16 0700		
#	Activity ID	Plant Areas	Activity Name	Orig Dur	Rem Dur	Start	Finish	% Comp	Total Float	Predecessors	Successors	Risk	
597	DWF-60	McCrI	McCarl's 8" Bleed Line Install on "C"Scr	24h	24h	23-Mar-16 07:00	25-Mar-16 15:00	0%	134h	SO4200	DWF-70	2	
598	Mile Stones			0h	0h	21-Mar-16 07:00	21-Mar-16 07:00		96h				
599	SAP Work Orders by Planner Groups			2572h	1262h	25-Jan-16 07:00A	11-May-16 11:00		67h				
600	No MN_WBS			40h	40h	20-Mar-16 07:00	24-Mar-16 15:00		400h				

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G.C. EXH. NO. 3

EXHIBIT NO. 663 RECEIVED ☒ REJECTED ☐
CASE NO. 04-CA-143503 CASE NAME FirstEnergy
NO. OF PAGES 72 DATE 11/1/18 REPORTER JAO



Week 3 - Environmental Awareness Topic

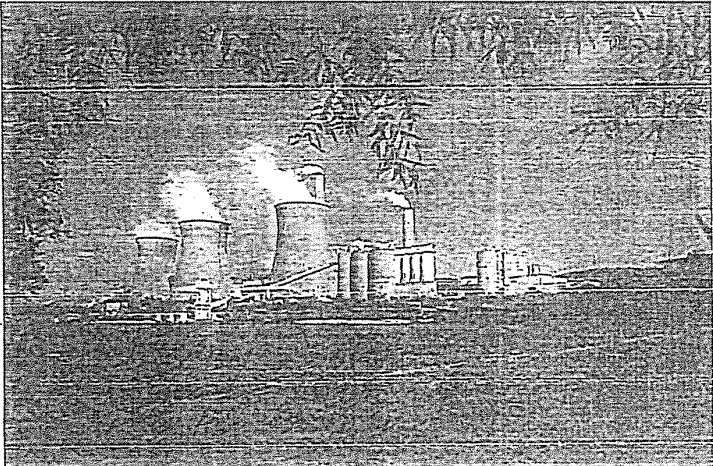
Week 3 (Jan 12 - Jan 18)	Reporting Near Misses
<p>REPORT ALL ENVIRONMENTAL NEAR MISSES</p> <p>Reporting near misses is necessary to identify and address potential environmental issues before they become reportable incidents.</p> <p>Reporting to the Environmental Group allows the plant to track issues, look for trends and system-wide issues, and develop solutions such as environmental programs, procedures and training, improved containment, additional monitoring, etc.</p>	 <p>The picture above is from a near miss at the Bay Shore Station in 2011. Addressing the spill immediately and using the proper countermeasures helped keep this oil leak a near miss, and not a reportable event.</p>
	




Outage Readiness Review Presentation

3

Director's Comments





Outage Readiness Review Presentation

4

Overall Outage Goals

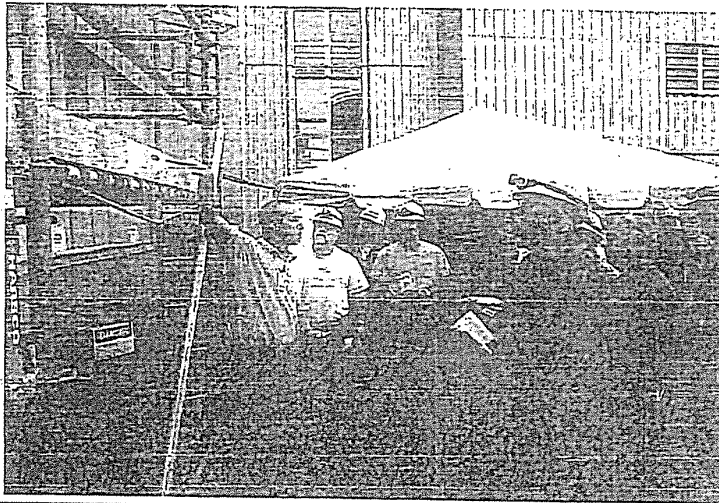
- Safety
 - 0 OSHA Recordable
 - Abnormal Conditions Identified and Proactively Mitigated
 - Contractor Safety Plans approved by all Area Leads
- Environmental Adherence
 - 0 Reportable Events
 - Environmental Analysis Completed for All Work Scope
- Schedule
 - Duration 56 Days (Breaker to Breaker) ———
 - Offline Date 3/19/2016 @ 00:01
 - Release to Dispatch 5/14/2016 @ 23:59
 - Actual performance within +/-12 hours of pre-outage baseline
 - Actual performance within +2/-4 hours of each weekly look ahead
- Budget Adherence
 - Costs planned to within +2/-5% of approved budget at Scope Freeze
 - Costs executed to within +0/-2% of approved budget at 40% complete
- Reliability
 - Equivalent Forced Outage Rate of 8.67% for 2016 for the Bruce Mansfield Plant
 - Equivalent Availability of > 83.1% between major outages
 - 100% Scope Attainment with <10% emergent growth

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Outage Readiness Review Presentation

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Safety Expo



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6

Safety Plans and Materials

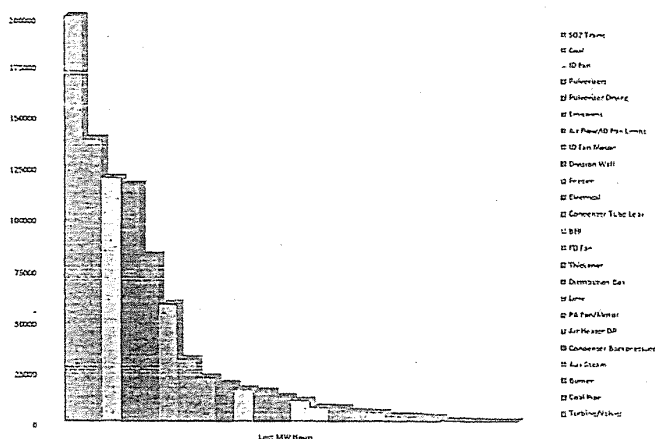
- Site and Job Specific Safety Plans
 - Job specific safety plans will utilize the new template.
- Generation Personal Safety Manual
- 2-Minute Drill Card
- Generation Rigging and Lifting Manual
- Mobile Medical Drug Screening
- Contractor Safety Orientation

Prisma

Outage Readiness Review Presentation

7

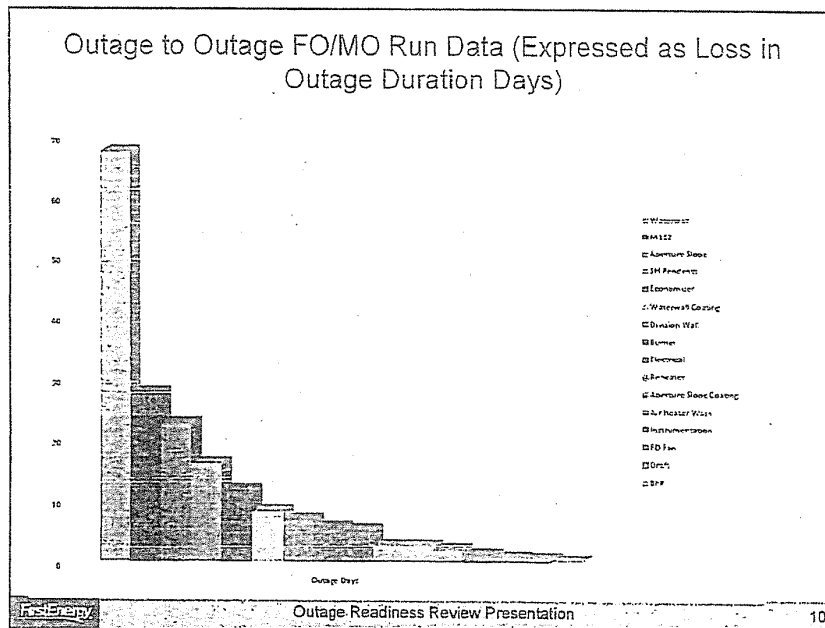
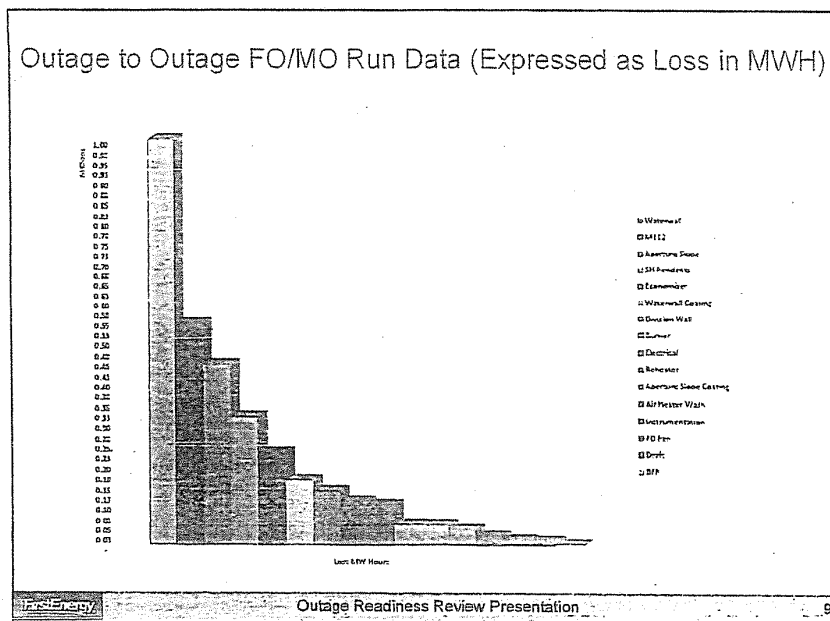
Outage to Outage De-rate Run Data (Expressed as Loss in MWH)



Prisma

Outage Readiness Review Presentation

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Outage Days by Year

- 2011: 32 Days
- 2012 to M112 Fall Outage: 13 Days
- M112 to End of Year: 4 Days (waterwall leaks)
- 2013: 32 Days
- 2014: 51 Days
 - Includes maintenance outages for coating repairs on rear waterwall (May 2014) and aperture slope (December 2014).
- 2015: 35 Days
 - Reduction in outages due to 2015 maintenance outage repairs and 2015 reserve shut-downs (less run-time).



Outage Readiness Review Presentation

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Outage Milestone Status

OTM13	Level III Schedule Review (Integrated Schedule)	01-Jan-16 15:00	20-Dec-15 07:00
OTM14	Issue Site Logistics (Site Plans, Confined Space Plan, PPE, etc)	01-Jan-16 15:00	20-Dec-16 07:00
OTM15	Alternate Outage Team Schedule Review (Deep Dive Schedule 01-Jan-16)	01-Jan-16 15:00	24-Dec-16 07:00
OTM16	Pre-Outage Inspections & Testing Defined by Engineering	26-Dec-15 07:00 A	26-Dec-15 07:00
OTM17	Readiness Review	09-Jan-16 07:00	09-Jan-16 07:00
OTM18	Baseline Schedule Completed (Measurement Baseline C1238)	26-Feb-16 07:00	30-Feb-16 07:00
OTM19	Permit Checked Out of Stores and Under Outage Team Control	20-Feb-16 07:00	20-Feb-16 07:00
OTM20	Tagging/Shutdown Review	27-Feb-16 07:00	27-Feb-16 07:00
OTM21	Contractor Pre-Job Complete	05-Mar-16 07:00	05-Mar-16 07:00
OTM22	Contractors Mobilized	05-Mar-16 07:00	05-Mar-16 07:00
OTM23	Final Weekly Outage Executive Report Issued	05-Mar-16 07:00	05-Mar-16 07:00
OTM24	Accounting Reference Numbers Sent to Executing Organizations	05-Mar-16 07:00	05-Mar-16 07:00
OTM25	Safety Expo	12-Mar-16 07:00	
OTM26	Unit Online	15-Mar-16 00:00	15-Mar-16 23:59
OTM27	Unit Online	14-May-16 07:00	14-May-16 05:00
OTM44	Primary Contractor Lessons Learned Submitted	24-May-16 07:00	24-May-16 07:00
OTM45	Outage Team Lessons Learned Submitted	24-May-16 07:00	24-May-16 07:00
OTM46	Unused Material Returned to Stock or Vendor	24-May-16 07:00	24-May-16 07:00
OTM47	Execution Milestones Deliverable Posted	24-May-16 07:00	24-May-16 07:00
OTM48	Final Invoice Request Sent to All Vendors	04-Jun-16 07:00	04-Jun-16 07:00
OTM49	Final Weekly Executive Summary Issued	07-Jun-16 07:00	07-Jun-16 07:00
OTM50	All Outage Work Orders Work Completed in SAP	13-Jun-16 07:00	13-Jun-16 07:00



Outage Readiness Review Presentation

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Outage Planning Milestone Recovery Plan

- OTM 13: Level III Schedule Review (Integrated Schedule). The internal work is identified but not tied weekly, BMP is going through a realignment of Maintenance Workers. Will have this resolved first week of February 2016.
- OTM14: Issue Site Logistics (Site Plans, Confined Space Plan, PIF, etc). Orientation Materials Distributed: The plant has this material on Order and should be in Jan16.
- OTM 15: Alternate Outage Team Schedule Review (Deep Dive Schedule 06-Jan-16): Was due on 24Dec15 but was moved to 06Jan16.



Outage Readiness Review Presentation

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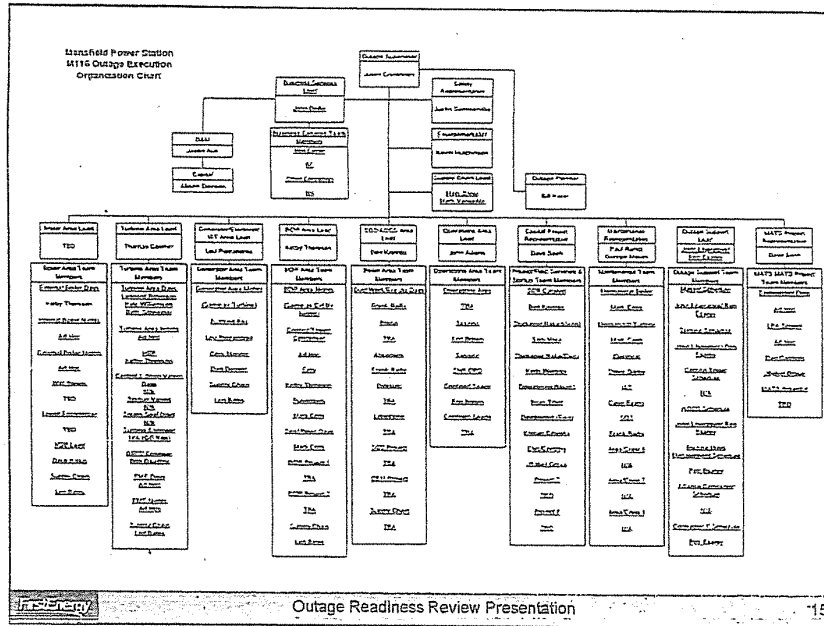
Major Contractors

- | | |
|---------------|---------------------------|
| • Enerfab | • MPW |
| • Aycock | • Avalotis |
| • Brand | • G.V. Hamilton |
| • Burnham | • First Quality Solutions |
| • Yates | • PMI |
| • Deep South | • GE |
| • DTS | • Speranza |
| • SI | • MD&A |
| • Arco | |
| • EthosEnergy | |



Outage Readiness Review Presentation

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Budget Overview	
• Total Current Year Capital Budget	\$33,192,416
▪ Thickener Rake Replacement	\$ Dewatering Budget
▪ SCR Catalyst	\$8,742,416
▪ LPA Screen Install	\$ MATS Budget
▪ Boiler WW	\$5,500,000
▪ Boiler Seal Trough	\$3,000,000
▪ Turbine Valves	\$500,000
▪ Air Heater Baskets	\$3,500,000
▪ Lower Economizer	\$4,500,000
▪ 1A & 1B Duct Coating	\$1,800,000
▪ IP Rotor 8TH, 9TH Stage	\$2,100,000
▪ 1B BFPT Overhaul	\$1,150,000
▪ HP & LP Packing/Spill Strips	\$800,000
▪ Thickener Influent Dist Box	\$500,000
▪ Cooling Twr Bypass Piping	\$450,000
▪ Gen Bushing Box	\$250,000
• Total Current Year O&M Budget	\$14,490,395
▪ SO2	\$1,186,030
▪ Boiler	\$3,751,639
▪ External Boiler Wash (Operations)	\$60,000
▪ Balance of Plant	\$2,453,807
▪ Turbine	\$5,289,620
▪ Electrical / I&T	\$853,855
▪ Overheads	\$885,444
• O&M Project Removal	\$2,874,581

Outage Readiness Review Presentation 16

Critical Path & Near Critical Path

- Turbine-Generator inspection (54 days)
 - Scheduling work with alliance contractor will begin after PO is issued
- Boiler Water Walls/Metalizing (54 days)
- Boiler Seal Trough Replacement (53 days)
- Economizer replacement (49 days)
 - Ready for hydro in 47 days.
 - Boiler casing closed in 49 days
- Thickener Rake Replacement (49 days)
- Air Heater (49 days)
 - Demo on two shifts, Install on one shift)
- 1A BFPT Overhaul (40 days)
 - Working 5 -8's (Daylight only)



Outage Readiness Review Presentation

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Critical Path

- Scope Description
 - Turbine-Generator inspection
- Interferences with Other Work
 - Crane usage with plant craft
- Opportunities
 - Pre-outage planning and scheduling with the GE team will identify areas of opportunity to improve schedule.
- Mitigation Actions
 - Shop coverage from Fleet Technical Services will be required to keep off site work on schedule.
 - GE craft labor will work 2/12/7 during disassembly and 2/10/6 for the remainder. Opportunity to go back to 2/10/7 or 2/12/7 for schedule recovery if necessary.



Outage Readiness Review Presentation

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Near Critical Path

- Internal Boiler and Lower Economizer
 - Interferences
 - Risks
 - Mitigation Actions
- Thickener Rake Replacement
 - Interferences
 - Risks
 - Mitigation Actions
- 1A BFPT Overhaul
 - Interferences
 - Risks
 - Mitigation Actions



Outage Readiness Review Presentation

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Major Component Integrity Assurance

- MCIA Related Scope
 - FD / PA fan inspection
 - ID fan inspection
- HEP / FAC Related Scope
 - FAC (16 Locations)
 - HEP (45 Locations).
- Protective Device Scope
 - Turbine valve inspection
 - Extraction Check Valve inspection and repair
 - Boiler Safety valve inspection and repair
- Health Study Projects
 - Generator Bushing Inspection



Outage Readiness Review Presentation

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Outage Communications Plan

- Meetings
 - Daily
 - Status Updates
 - 1000 (30 mins)
- Daily Outage Update Report
- Weekly Budget Review
- Weekly Contractor Forecast Review
- Weekly Safety and Environmental Walkdowns



Outage Readiness Review Presentation

21

Budget Tracking Sheet

- We will be using the Outage Cost Tracking sheet during the M116 outage.
 - Tracking sheet shows existing commitments and allows area managers to update their forecasts.
- Utilizing CCTS for labor costs.
- Weekly budget forecast meetings.
- Scope outside of budget must be approved by management team via emergent scope requests.



Outage Readiness Review Presentation

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Operational Readiness

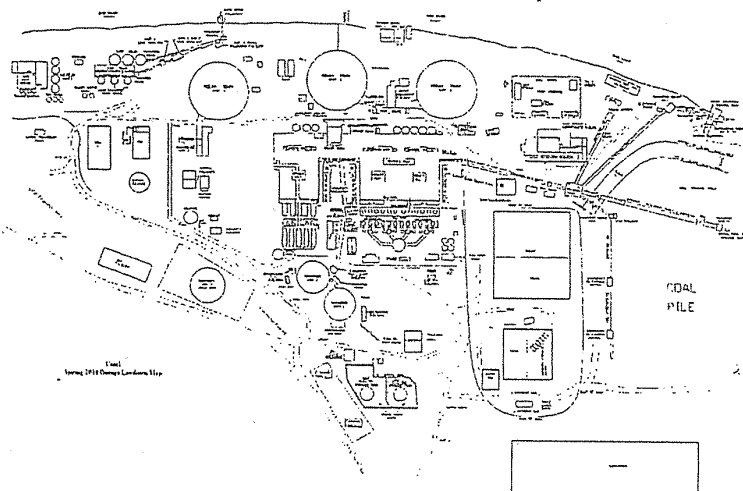
- Tagging
 - Tagging needs have been identified
 - Process Review In Progress With Area Managers
- Pre-Outage System Preparation
 - Fuel Systems – All bunker levels to be lowered to a minimum level, all feeders run empty from bunker pipes down.
 - Feed Water Systems – All feed water systems, Condensate, Deaerator, LP- HP heaters to be drained.
 - Condenser – Full condenser hydro during outage
 - Cooling Water Systems – Cooling Tower basin to be drained. HSW system to be isolated and drained.
 - Lubrication – Main TLO reservoir and A & B BFP L/O reservoirs to be drained and cleaned. The oil to be centrifuged and reservoirs refilled. A & B A/H Falk gear boxes, upper guide & lower support bearing reservoirs oil to be changed. Thickener rake drives and bull gear oil to be changed. Other equipment oil changes to be determined by PM and Oil Analysis.
 - SO2 Systems – All reactors and absorbers will be isolated, drained. #1 Thickener to be drained and cleaned.
- Shutdown/Startup Schedule Review
 - Preliminary/Detailed/Final Review – Shutdown plan is developed.



Outage Readiness Review Presentation

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Site Logistics Map



Outage Readiness Review Presentation

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Administrative Readiness

- 100% of Scope Represented in Work Orders
- 70% of Total Outage Budget Planned in Work Orders
 - All work orders have been created.
 - Creation of requisition and PO's is in progress.
- 60% of Planned Costs for Contractors Converted to PO Commitment
 - New Brand and Enerfab PO's created in January 2016.
- 80% of Scope Represented in Level III Primavera Schedule
 - GE schedule in progress. Will be imported into FE schedule.

Outage Readiness Review Presentation

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Presentation Order

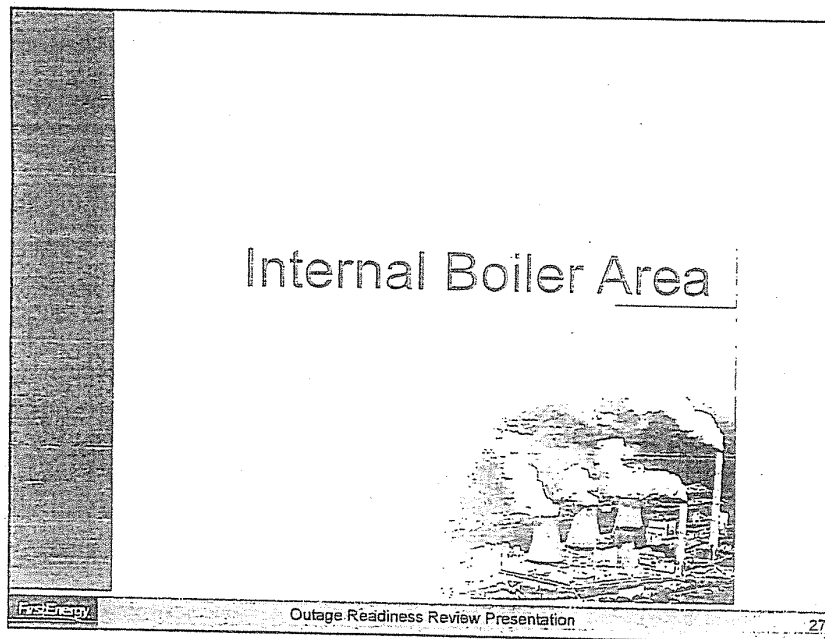
- | | |
|-------------------|-------------------|
| • Internal Boiler | Justin Crunkleton |
| • External Boiler | Kelby Thoreson |
| • AQCS/SCR | Benjamin Krembs |
| • Turbine | Thomas Cowher |
| • Generator | Luigi Pietrandrea |
| • MATS | David Seeh |
| • Thickener | Sara Wise |

Outage Readiness Review Presentation

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Fractal
Troy
-201-794-2240

724-794-2240



Internal Boiler Budget	
•	Boiler Waterwall/Coating Capital (2016): \$5.5 million
•	Boiler Bottom Ash Capital (2016): \$3 million
•	Lower Economizer Capital (2016): \$4.5 million
•	Boiler Cost of Removal (2016)
▪	Waterwall/Coating: \$544,000
▪	Bottom Ash: \$300,000
▪	Lower Economizer: \$500,000
•	Boiler O&M (2016): \$3.75 million

Outage Readiness Review Presentation 28

This slide has a white background with a black border. The title 'Internal Boiler Budget' is centered at the top in a large, black, sans-serif font. Below the title is a bulleted list of budget items. The first four items are top-level bullets, and the last three are sub-bullets under 'Boiler Cost of Removal (2016)'. At the bottom left is the 'FirstEnergy' logo, and at the bottom center is the text 'Outage Readiness Review Presentation'. The slide number '28' is in the bottom right corner.

Internal Boiler Contractors

- Enerfab: Boilermakers, Laborers, Pipefitters, Operators
- Brand: Scaffolding
- Burnham: Insulation, Lead Abatement
- DTS: X-ray
- PMI: Machining and Heat Treatment
- FQS: Boiler NDE
- Structural Integrity: Phased Array
- Deep South: HP Wash
- Avalotis: Sandblasting
- Coating: Liquid Metal vs. Integrated Global
- Cleveland Industrial Recycling: Economizer/Air Heater Scrap Removal

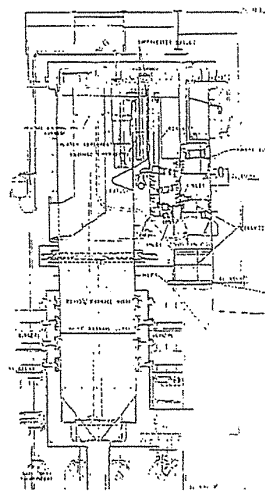


Outage Readiness Review Presentation

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Internal Boiler: Capital Scope

- Waterwall Panels
- Waterwall and Aperture Slope Coating
- Lower Economizer Replacement
- Bottom Ash



Outage Readiness Review Presentation

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Waterwalls

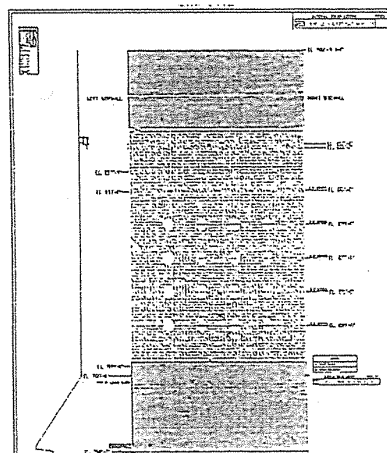
- High Pressure Wash.
- Erect full boiler scaffolding.
- Sandblasting.
- NDE.
- M112: Purchased 30 (15-tube) panels and 6 (16-tube) panels for east waterwall replacement. All panels are 309 laser clad. Project was deferred.
- Most failures since have been on rear wall burner area, aperture slope, and mix area.
- M116 budget will cover up to 14 panels.
- Primary focus will be on rear wall burner zone but all waterwall areas will be inspected to determine final scope.

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Outage Readiness Review Presentation

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Failure Locations Jan 2011 to Dec 2015



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Leak Count	Failure Date	Tracking BTF #	Location
1	1/8/2015	MN-1-2015-1A	Reheater
2	1/8/2015	MN-1-2015-1B	West WW
3	1/17/2015	MN-1-2015-2	East WW
4	3/11/2015	MN-1-2015-3B	Aperture Screen
5	3/11/2015	MN-1-2015-3A	South Lower Slope
6	3/31/2015	MN-1-2015-4A	East PSH Outlet Hdr
7	3/31/2015	MN-1-2015-4B	East WW
8	4/27/2015	MN-1-2015-5	SI Burner
9	6/26/2015	MN-1-2015-6A	Aperture Slope
10	6/26/2015	MN-1-2015-6B	Front Waterwall
11	6/26/2015	MN-1-2015-6C	East Waterwall Penhouse
12	6/26/2015	MN-1-2015-6D	Rear Wall
13	6/30/2015	MN-1-2015-7A	North B/A Slope
14	6/30/2015	MN-1-2015-7B	West WW
15	6/30/2015	MN-1-2015-7C	West WW
16	7/2/2015	MN-1-2015-8A	Aperture Slope
17	7/2/2015	MN-1-2015-8B	West Wall Mix Area
18	8/11/2015	MN-1-2015-9A	East WW
19	8/11/2015	MN-1-2015-9B	East Wall Mix Area
20	11/6/2015	MN-1-2015-10A	West WW
21	11/6/2015	MN-1-2015-10B	West WW
22	11/6/2015	MN-1-2015-10C	West WW
23	11/6/2015	MN-1-2015-10D	West WW
24	11/6/2015	MN-1-2015-10E	Rear Wall Mix Area
25	11/6/2015	MN-1-2015-10F	Rear Wall Mix Area
26	11/19/2015	MN-1-2015-11A	Rear Wall
27	11/19/2015	MN-1-2015-11B	Rear Wall
28	11/19/2015	MN-1-2015-11C	Rear Wall Mix Area
29	11/19/2015	MN-1-2015-11D	Rear Wall
30	11/19/2015	MN-1-2015-11E	Rear Wall
31	11/19/2015	MN-1-2015-11F	Rear Wall
32	11/19/2015	MN-1-2015-11G	Front Wall
33	11/19/2015	MN-1-2015-11H	Front Wall
34	11/19/2015	MN-1-2015-11I	West Wall
35	11/19/2015	MN-1-2015-11J	Penhouse Platen Socket
36	11/23/2015	MN-1-2015-12A	East Wall
37	11/23/2015	MN-1-2015-12B	East Wall
38	11/23/2015	MN-1-2015-12C	East Wall
39	11/23/2015	MN-1-2015-12D	East Wall
40	11/23/2015	MN-1-2015-12E	Rear Wall Mix Area
41	12/15/2015	MN-1-2015-13A	Front WW at East Div Wall
42	12/15/2015	MN-1-2015-13B	East Division Wall
43	12/15/2015	MN-1-2015-13C	East Division Wall
44	12/15/2015	MN-1-2015-13D	East Division Wall
45	12/15/2015	MN-1-2015-13E	East Division Wall

Outage Readiness Review Presentation

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Leak Count	Failure Date	90 Day Date	Tracking BTF #	Location
1	2/8/2014	5/9/2014	MN-1-2014-1	Rear Wall
2	2/8/2014	5/9/2014	MF-1#2014-2	Aperture Slope
3	3/2/2014	5/31/2014	MN-1-2014-3	Rear Wall
4	3/6/2014	6/4/2014	MN-1-2014-4	Rear Wall
5	4/12/2014	7/11/2014	MN-1-2014-5	Rear Wall
6	4/13/2014	7/12/2014	MN-1-2014-6	East WW
7	4/22/2014	7/21/2014	MN-1-2014-7	Economizer
8	5/10/2014	8/8/2014	MN-1-2014-8	Rear Wall
9	5/10/2014	8/8/2014	MN-1-2014-9	Reheat
10	5/10/2014	8/8/2014	MN-1-2014-10	Aperture Screen
11	5/23/2014	8/21/2014	MN-1-2014-11	Rear Wall
12	5/23/2014	8/21/2014	MN-1-2014-12	Platen Socket
13	6/20/2014	9/18/2014	MN-1-2014-13	Aperture Slope
14	6/20/2014	9/18/2014	MN-1-2014-14	Reheat
15	6/20/2014	9/18/2014	MN-1-2014-15	West WW
16	8/8/2014	11/6/2014	MN-1-2014-16	South
17	9/13/2014	12/12/2014	MN-1-2014-17	Aperture Slope
18	9/14/2014	12/13/2014	MN-1-2014-18	North Wall
19	9/14/2014	12/13/2014	MN-1-2014-19	North Wall
20	10/1/2014	1/9/2015	MN-1-2014-20	Aperture Slope
21	11/1/2014	2/9/2015	MN-1-2014-21	Finishing SH
22	11/1/2014	2/9/2015	MN-1-2014-22	West Wall
23	12/3/2014	3/3/2015	MN-1-2014-23	Rear Slope Wall
24	12/3/2014	3/3/2015	MN-1-2014-24	Platen Socket
25	12/18/2014	3/18/2015	MN-1-2014-25	Division Wall
26	12/22/2014	3/22/2015	MN-1-2014-26	Aperture Slope
27	12/24/2014	3/24/2015	MN-1-2014-27	Aperture Slope

Outage Readiness Review Presentation

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Waterwall/Waterwall Coating

- \$1.5 million in additional was approved in October 2015.
- Proposals submitted by Liquid Metals and Integrated Global but not awarded yet.
- Base Scope
 - Replace 1000 sq ft 45 CT on waterwalls and 700 sq ft of Densys 200 on the aperture slope.
- Liquid Metals performed this scope during the M314 outage and will honor FE's warranty requests.
- Integrated Global's bid is lower but they were offering IGS 5450 instead of 45CT. They will warranty IGS 5450 for 7 years.
 - A test panel was submitted to Beta Lab for evaluation.
 - IGS 5450 is a 40 wt% chromium cladding system.
 - Does not exhibit the residual stress properties that can cause 45CT to fracture at tie-in locations.
 - Densys 200 is the trade name of the IGS aperture slope coating. They are also offering to use IGS 1020, which has shown improvement over Densys 200.

Outage Readiness Review Presentation

Outage Readiness Review Presentation

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Lower Economizer

- Lower Economizer was purchased from B&W for the M112 outage. Project was deferred.
- Scope will include inlet and outlet headers.
- Element quantity is being changed from 34 elements to 30 elements along with tube design changes.
- Same outlet flue gas temperature but lower flue gas velocity.
- Previous economizer replacement was in the 1990s but did not include the header replacement.

Outage Readiness Review Presentation

Outage Readiness Review Presentation

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Lower Economizer Logistics

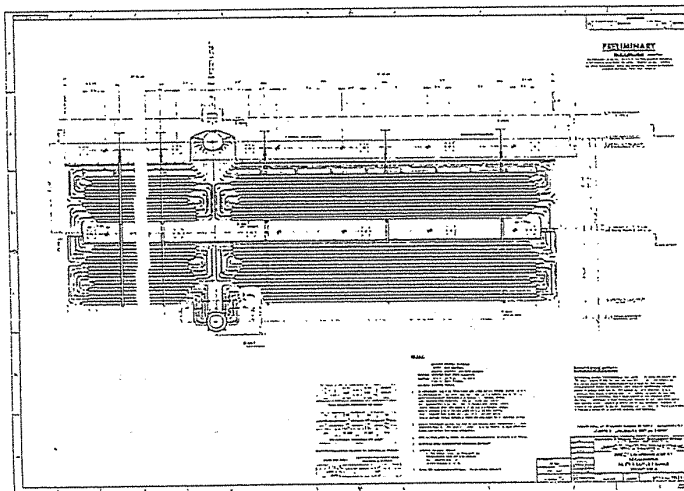
- QA inspection of components completed at storage location.
- Will start deliveries of components in February.
- Crane will be staged in March on east side of the unit.
 - Manitowoc 2250, 300 Ton Crane.
 - Mascaro to assist with crane mat installation and removal.
- Southwest corner of the coal yard will be used for cutting economizer components down to scrap spec for transport off site.

PREVIEW

Outage Readiness Review Presentation

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Lower Economizer



PREVIEW

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Lower Economizer

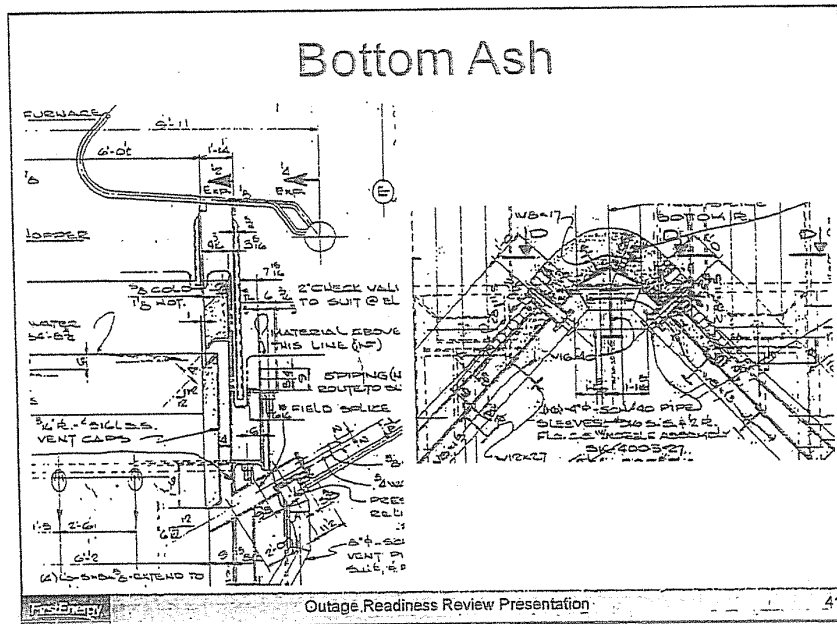
	Existing	New
Bare Tubes	2.50 OD x 0.350 MW SA210C	Inlet = 2.25OD x 0.282MW, SA210C Outlet = 2.0 OD x 0.250MW, SA210C Bare tubes have tube shields installed.
Finned Tubes	2.25 OD x 0.280MW SA201C	
Headers	Inlet = 25.5 OD x 4.125 MW, SA106C. 42,100 lbs. 27 ft long. Outlet = 22.5 OD x 3.625 MW, SA106C. 23,000 lbs. 23 ft long.	Inlet = 27 OD x 3.75MW, SA106C. 28 ft long. 32,381 lbs Outlet = 27.25 OD x 4.0 MW, SA106C. 25 ft long. 31,131 lbs.



Bottom Ash

- Seal Skirt
- Seal Trough
 - Trough and skirt provide air seal for the bottom of the boiler.
- Inconel Screens
 - Protection of the skirt.
- Seal Trough Sprays
 - Assist with cleaning ash out of trough.
- Refractory Cooling Water Headers
- Hopper Cricket Replacement





Internal Boiler: O&M Scope

- Penthouse Inspection/Repairs
 - Last inspection was M108 Outage.
- Superheat Pendent Inspection/Repairs
- Division Wall Inspection/Repairs
 - Lower wall capital replacement project was deferred.
- Backpass Inspection/Repairs
 - Reheater, Primary Superheater, Upper Economizer
- Burner Inspections & Repairs
 - Will have to comply with MATS Work Practice Standards. Compliance is April 16, 2016.
 - Repairs must be made within 3 months of inspection.



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Penthouse

- Platen Header
 - 624 sockets, 5 girth welds
 - M108: 102 sockets show early stage damage around circumference. No girth weld damage. Repaired 72 indications.
- Finishing Headers
 - 630 sockets, 4 girth welds
 - Stub tube welds were replaced in 2005. 36 socket repairs in M108.
- Primary Superheater Headers
 - 624 sockets, 4 girth welds
 - 60 sockets repaired in M108.
- Inspection was during the M108 outage.
 - Sandblasting, WFMT, Phased Array
- Recent Failures
 - 3-31-15: East PSH Header
 - 12-31-14: Platen Socket (found SH spray isolation valve ball mis-aligned)
 - 5-23-14: Platen socket



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Interferences

- Economizer must be worked at the same time as boiler sandblasting. Will require installation of an alternate vent system that will connect the H-row burners to the economizer hoppers.
 - Remove four burners and connect ventilation duct between burner openings and connections on the economizer hoppers.
- Economizer and LPA screen project will occur at the same time. Bulkheads will be installed but LPA work will be on hold during major economizer lifts. LPA installation will start after sandblasting.
- Economizer will require three Sundays in order to meet the hydro date of Friday 4-29-16. Maintaining hydro date is critical for releasing boiler for coating.
- Economizer project will close off the road on the east side of unit 1. All traffic will be diverted around the coal yard. SCR catalyst deliveries will be maintained on south area of road.



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Internal Boiler: Risk Areas

- Penthouse/Headers Inspection/Repairs
- Waterwall Inspection & Replacement
 - Repairs and panel replacement for focus on lower furnace rear wall.
 - Mix zone membrane cracks are not significant cause of outages but are responsible for cost escalation of forced outages when these leaks are found during hydros.
- Waterwall/Aperture Slope Coating Inspections/Repairs
 - Even if \$5 was not a concern, schedule limitation is.
- Superheat Pendants Inspection & Repairs
- Backpass Inspection & Repairs
- Wind-box Inspection/Repairs
- Economizer Outlet Duct Repairs
- Burner Inspection and Repairs/Combustion Optimization for MATS.
 - Repairs will need to be completed within 3 months of identification.
 - Will need to align spare parts strategy with inspection findings.



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Internal Boiler Outage Risk Matrix

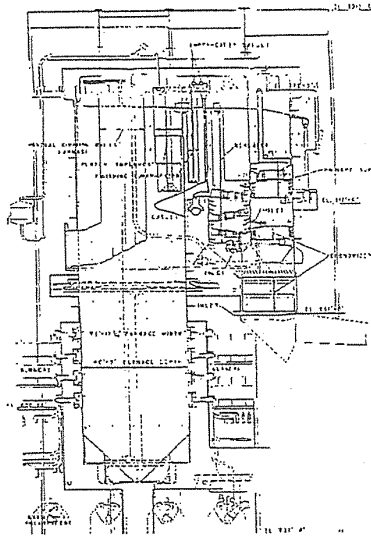
Risks or Opportunities	Likelihood Percentage	Total Severity	Expected Value	Risk Indicators or Drivers (Include Dates, Amounts, Penalties, Costs, Etc.)
Waterwall	100%	\$3.0M	\$3.0M	The expected value is associated with the number of forced outage that will occur over the next 3 years, not including lost revenue. (We expect to have 12 tube leaks over the next 3 years with the current work scope.)
SH Pendant repairs	100 %	\$756,000	\$756,000	The expected value is associated with the number of forced outage that will occur over the next 3 years, not including lost revenue. (We expect to have 3 pendant leaks over the next 3 years with the current work scope.)



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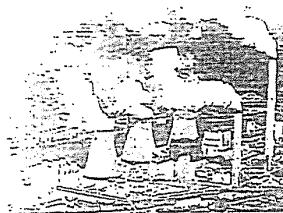
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Internal Boiler: Questions



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External Boiler Areas



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External Boiler Budget

- Boiler External O&M (2016) - \$2,453,807
- Air Heater Basket Replacement
 - Capital (2016) : \$3,500,000
 - O&M Removal (2016) : \$400,000



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External Boiler Contractors

- Enerfab: Boilermakers, Laborers, Pipefitters, Operators
- Brand: Scaffolding
- Burnham: Insulation
- PMI: Machining & Heat Treatment
- FQS: NDE
- Structural Integrity: Phased Array
- Avalotis: Sandblasting
- Portersville: Valve Support
- MPW: Vac Truck & HP Wash
- HES: Eddy Current Testing



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External Boiler Scope

MCIA

- PA Fans
- FD Fans
- Deaerator Tank
- Flash Tank

FAC

16 Locations

HEP

- 29 Main Steam Locations
- 15 Hot Reheat Locations
- Hot Reheat Seam Weld

AIR HEATER

- Baskets and Seals

O&M Work

- Safety Valve Repairs
 - Will EVT Prior to Outage
- Extraction Check Valve Repairs
- "V" Valves
 - Borescope attemperator targets
- Attemperator Valve Work
 - Replace E & W Block Valves
 - Replace W Isolation Valve
 - Overhaul Control Valves
- Pulverizer Repairs
- Boiler Wash
 - 16th floor to Basement

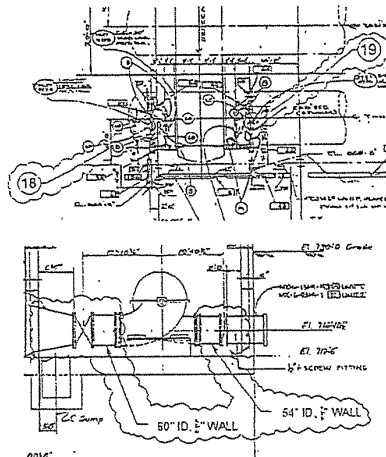
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FAC Locations

Location 6	Piping at A valve
Location 7	Piping at B valve
Location 8	Piping at C valve
Location 9	Piping at D valve
Location 10	18" BFP Discharge at Flow Nozzle
Location 11	24" BFP Discharge at Flow Nozzle
Location 12	2B to 1B HP FWH Drain
Location 13	3B to 2B HP FWH Drain
Location 14	3A to 2A HP FWH Drain
Location 15	3-4" SH Attemp Spray Water at E Valve Station
Location 16	6" SH Attemp Spray Water at E Flow Nozzle
Location 17	4LP to 3LP FWH Drain
Location 18	1B HP FWH to Deaerator Drain
Location 19	1A HP FWH to Deaerator Drain
Condenser 90"	South Inlet & Outlet Circulating Water
1A Condenser	Circ Water Pump Suction & Discharge



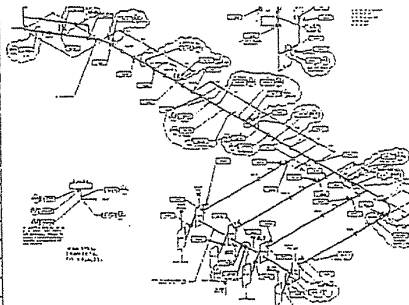
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Main Steam HEP Inspection Locations

MSMC 14	1" Drain on Main Steam Piping between CV and Turbine
MSMC 15	
MSMC 16	
MSMC 17	
MSMC 5	6" Main Steam Drain Line
RG 12, 14, 15, 16, 17	Radiographic Plug
MSMC 6	6" BFP Turbine Steam Line
MSMC 7	1" Pressure Connection
MSMC 8 & 9	½" Pressure Connections
MSMC 10	1 ½" Sample Nozzle
MSMC 11	6" Drain Line
MSTH 7, 8, 9	Thermowell
MSH 17, 24A, 56	Welded Lugs
MSH 24B	Snubber Welded Lugs
MSMC 13	1" Pressure Connection
MSH 11A	Welded Jacking Lugs
MSH 12	Riser Clamps and Shear Lugs
Flash Tank Steam Out to Finishing Superheater 12" Nozzle Weld	
Flash Tank Steam In from P Valve 12" Nozzle Weld	
Flash Tank Drain to Condenser 12" Nozzle Weld	

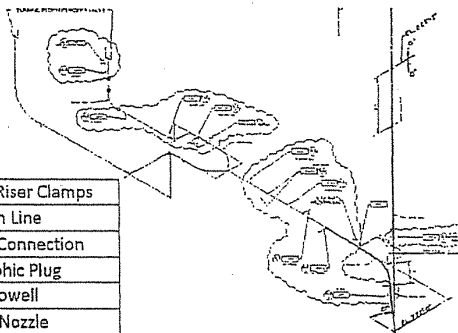


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Hot Reheat HEP Inspection Location

HRH 6	Shear Lugs & Riser Clamps
HRPT 1	6" Drain Line
HRPT 2, 3	½" Pressure Connection
RG 8, 9, 10	Radiographic Plug
HRTH 1, 2	Thermowell
HRMC 1	Sample Nozzle
HRH 11, 13E	Welded Lug
HRPT 4	6" Drain Line
HRPT 5	1" Pressure Connection
Hot Reheat IP Turbine Inlet	

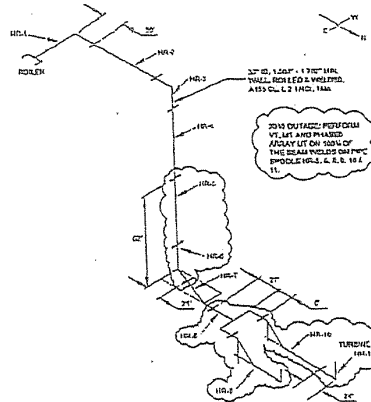


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Hot Reheat Seam Weld Inspection

- Inspection of spools 5, 6, 8, 9, 10 & 11
- The NDE methods used will be
 - Time of Flight Diffraction (TOFD)
 - Annular Phased Array (APA)
 - Wet Fluorescent Magnetic Particle Testing (WFMT)

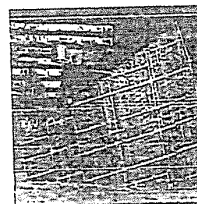
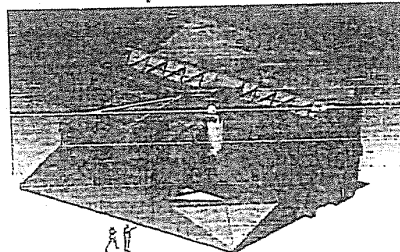
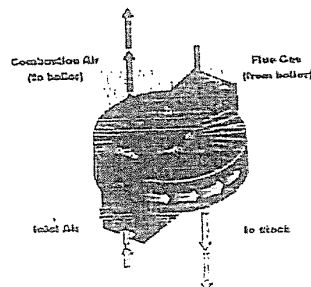


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Air Heater Basket Replacement

- Replace Baskets & Seals for (2) Air Preheaters
 - = 480 hot end baskets
 - = 624 cold end baskets



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(5)

Air Heater Project Logistics

- Delivery of baskets will start in February.
- Baskets will be staged on east end of turbine deck to avoid interference with turbine components staging.
- Baskets will be removed/installed from the 3.5 floor elevation and the basement.
- Existing baskets will be loaded into dumpsters for transport off-site.

Air Heater Project Risk/Interference

Project Interferences

- One air heater will be blanked off during boiler sandblasting to continue projects in parallel.
- Will be sequenced based on scrubber coating schedule.
- Economizer drop system installation will occur in the same area. Project is in progress pre-outage to minimize interferences.
- Seal plate and T-Bar Repairs
 - Installation is on day shift only with some time allotted for these repairs. Night shift can be added if extensive repairs are required.

External Boiler: Risk Areas

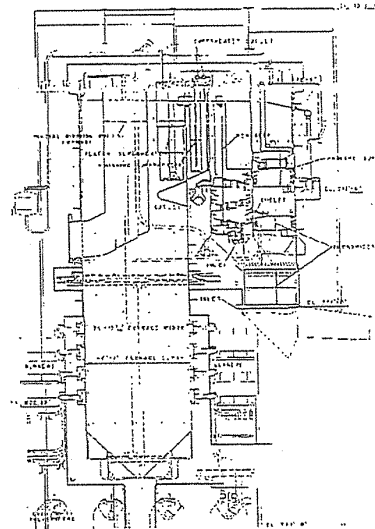
- Pulverizer Repairs
 - BSO dampers, aux air dampers, lube oil system repairs.
 - Capital projects for new PASO and BSO dampers deferred. Need to maintain existing components.
 - Upgrade lube oil system by adding an extra lube oil pump for fast switch over (reduce derates).
 - Identify isolation issues with bunker gates and feeder gates.
 - Cleaning classifiers and coal pipes.
- Replacement/Repairs of Attemperator Spray Valves
 - Has been causing water induction into the platen superheater header.
- Attemperator Target Inspections
 - Spray liners originally purchased for M112 (deferred). Use one for emergent M213 replacement. One available.
- Inspection/Repairs of MCIA components
 - Deferred replacement of HRH header.
- Feedwater Heaters Inspection & Repairs
 - Eddy current of 2A and 2B HP Feedwater Heaters

Ex-1000

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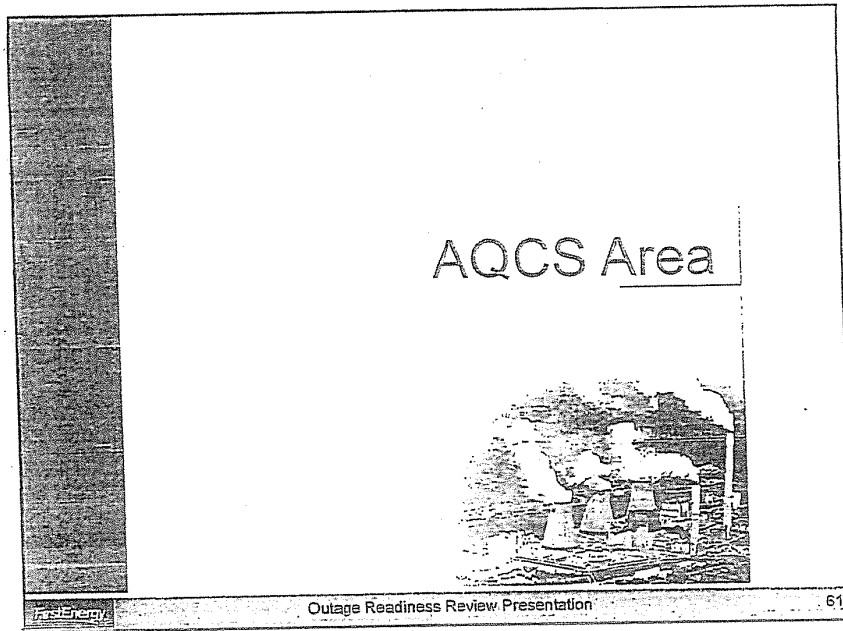
External Boiler: Questions



Ex-1000

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AQCS Area O&M Work Scope	
Total O&M Budget: \$1,186,030	
ID Fans: <ul style="list-style-type: none"> • UHP (40k water) Blast Rotors • NDE Rotor Inspection (visual, PT, UT) • Weld Repair Rotors per insp. • Weld Repair Louvers/Housings per insp. • ID Fan Motor & Coupling PM's • Balance ID Fan Rotors 	Ductwork/Stack: <ul style="list-style-type: none"> • Clean/Inspect Reheat Chamber to Stack • Wash Stack Flues • Inspect Flue coatings
Scrubber/Absorber Vessels: <ul style="list-style-type: none"> • HP (10k water) Blast Tray Ring Headers • Replace Tray Ring Header Nozzles per inspection • Hose Mist Eliminators • Repair Coatings per inspection • Replace all tangential nozzles • Repair Center-cone Spray Manifolds per inspection • Repair Pump Suction Baffle per inspection 	Lime Recycle Tank: <ul style="list-style-type: none"> • HP Blast Tank, Vac & Inspect • Weld Repair per Inspection • Overhaul One Pump • Replace Suction/Discharge Valves
	Thickener Transfer Tank: <ul style="list-style-type: none"> • Clean & Inspect
	A/H Outlet Plenum: <ul style="list-style-type: none"> • Weld Repair Casing per inspection

AQCS Area Capital Work Scope

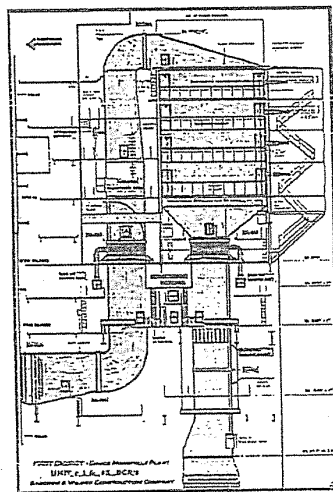
- SCR Catalyst Replacement – Layers 1-4
 - \$8.74M Capital
 - \$675K Cost of Removal
- 1A & 1B SO₂ Train Reline
 - \$1.8M Capital
 - \$200K Cost of Removal
- Thickener Influent Distribution Box Replacement
 - \$500K Capital
 - \$50K Removal
- Purchase Spare ID Fan Rotor*
 - \$1.3M Capital
 - \$XX Cost of Removal

*Installation of onsite spare not required based on ID Fan Rotor vibration monitoring and NDE inspections; Recommending using funds for alternative SO₂ area capital projects.

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AQCS Capital: SCR Catalyst



Capital Budget - \$8.74M

- \$ 4.47M Catalyst Cost
- \$ 4.27M Install, Materials, Overheads, Rentals
- \$ 675K COR

- Clean Reactor Pre-Outage
- Remove & Ship All Catalyst to SCRTech for Regen
- Inspect & Repair Casing, Struts, Turning Vanes, Ammonia Grid, Sonic Horns
- Inspect EJ-04A/B (penthouse) Expansion Joints
 - EJ-04A original vintage
 - EJ-04B replaced 2015
- L1: Install Regenerated Ceram DeNO_x Plate Catalyst
- L2: Install Regenerated Cormetech DeNO_x Honeycomb Catalyst
- L3 & L4: Install New Cormetech 'Comet' Mercury Oxidation Honeycomb Catalyst

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SCR Catalyst Risk Assessment

Project Logistics

- Interferences
 - North roadway/area access to lift bay blocked by Economizer crane.
 - South roadway/area access to lift bay congested due to DWF activities.
 - Onsite laydown space not available for 836 catalyst modules (new + 836 spent = 1672 total).
 - U3 SCR Layer 3 replacement in February (same crew).
- Risks
 - Delay of U1 Startup if U3 SCR or U1 SCR runs long.
 - Access & Laydown restrictions hold up installation activities.
- Mitigation Actions
 - Allow for 3 weeks to transfer from U3 to U1; Mobilize & Clean U1 SCR in bypass pre-outage.
 - SCR Tech & Maverick Trucking to manage all shipment logistics
 - Ship & Store catalyst in enclosed semi trailers; no double handling or laydown required.
 - Offsite trucking yard to be used for all shipping/receiving/storage to limit site traffic (SBS lot).
 - Enerfab teamsters will run trailers to lift bay for real-time loading/unloading.

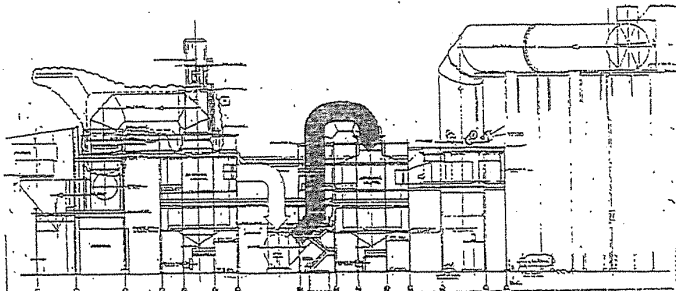
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AQCS Capital: 1A, 1B SO₂ Train Reline

Capital Budget - \$1.8M

- Materials of Construction: Carbon steel with vinyl-ester coating;
- Expected Coating Life: 15-20 year
- 1A & 1B Duct coating all original; reline deferred 1994-present.



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1A/1B Relining Risk Assessment

Project Logistics

- Interferences – Hot Work
 - Extensive ID fan rotor weld repairs anticipated.
 - Extensive scrubber weld repairs anticipated.
- Risks
 - Safety - Hot work during coating activity.
 - Budget/Schedule - Extensive ID fan discharge duct metal repairs possible.
- Mitigation Actions
 - Prioritize all hot work and inspections on 1A & 1B trains.
 - Maintain one train buffer between coating activities and hot work.
 - Sample/monitor SO₂ building air regularly during coating; restrict access at all elevations during coating.

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Planning and Procurement Status

- All MWO's have been created
- All major contractor estimates have been received; labor requisitions being processed.
- Material quotes received; purchase orders issued for all long lead time and critical items.
- Logistics/laydown planning complete

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AQCS Area Outage Risk Matrix

Risks or Opportunities	Likelihood Percentage	Total Severity	Expected Value	Risk Indicators or Drivers (Include Dates, Amounts, Penalties, Costs, Etc.)
SO2 Expansion Joints	75%	\$400,000	\$300,000	Replacements deferred in 2012. Several identified for replacement.
SCR Inlet Expansion Joints	50%	\$410,000	\$205,000	Both joints have been in service for almost twice the expected life (7 years) of the joints and likely to fail, similar to recent failures on Unit 2. The joint can't be replaced on line due to draft issues and will require ~ a 10 day outage if it fails before 2018
Falling Absorber Internals	75%	\$400,000	\$300,000	Flow baffles and beams collapsing in 1C-1F absorbers; entry prohibited for safety reasons. Debris clogs drains, risking carryover & stack event. Removal cost expected to be a minimum of \$100K per absorber.
Scrubber Centercone Spray Manifolds	25%	\$1.2M	\$300,000	Manifolds were identified for replacement during M112 outage due to erosion and corrosion. Effective weld restoration may not be possible, risking failure before next scheduled outage. Recommend replacing all manifolds under capital.

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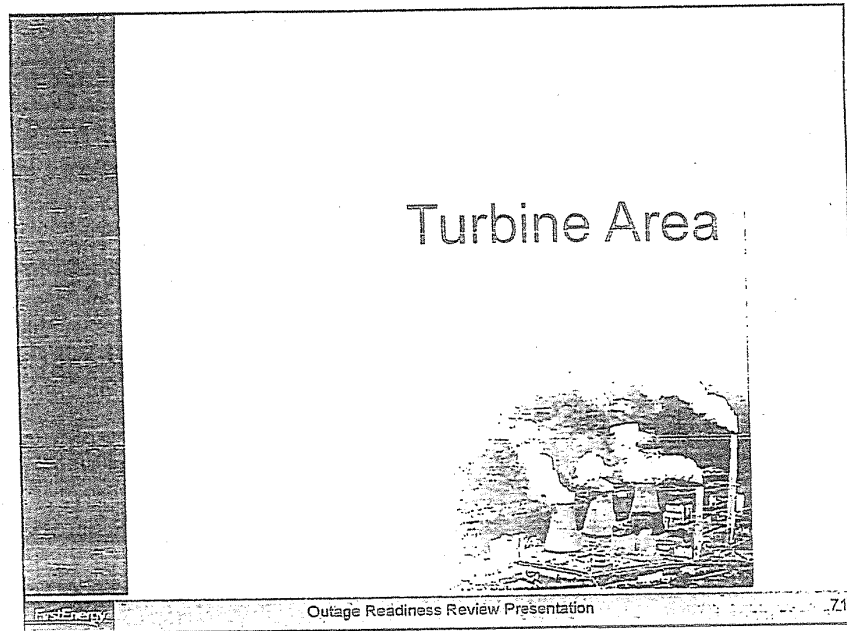
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AQCS Area Outage Risk Matrix

Risks or Opportunities	Likelihood Percentage	Total Severity	Expected Value	Risk Indicators or Drivers (Include Dates, Amounts, Penalties, Costs, Etc.)
1B Flue Coating (verify flue, costs)	25%	\$4M	\$1M	Reline of 1A performed 2008. No inspections performed in 2012. Coating condition unknown and O&M repair moneys budgeted. Limited funding for cleaning and inspection.


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Turbine-Generator Labor

- GE will provide project management, supervision and craft labor to open/clean/close the main turbine, turbine valves, and generator under the alliance contract.
 - Final approval for the GE PO was received on 11/12/15.
 - Project team will start planning and scheduling as soon as GE receives the PO.



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Turbine Scope Capital Budget

- Turbine Capital (Current Year):
 - HP Turbine Packing and Spill Strips: \$300,000
 - IP Turbine 8th and 9th Stage Buckets: \$2,100,000
 - LP Packing and Spill Strips: \$500,000
 - Turbine Valves: \$600,000
 - Cooling Tower Bypass Piping: \$450,000
 - 1A BFPT Overhaul: \$500,000
 - 1A BFPT Blade Replacement: \$650,000 (post-outage)

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Turbine Scope Cost of Removal Budget

- Turbine Cost of Removal (Current Year):
 - HP Turbine Packing and Spill Strips: \$50,000
 - IP Turbine 8th and 9th Stage Buckets: \$300,000
 - LP Packing and Spill Strips: \$35,000
 - Turbine Valves: \$60,000
 - Cooling Tower Bypass Piping: \$45,000
 - 1A BFPT Overhaul: \$50,000
 - 1A BFPT Blade Replacement: \$70,000 (post-outage)

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Turbine Scope O&M Budget

- Turbine O&M : \$5,449,374

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Turbine Valves

- The four Main Stop valves will be disassembled for a complete inspection.
- The four MSV EHC Actuators will be removed and sent to United Servo Hydraulics to be reconditioned.
- The CV1 and CV2 control valves will be inspected.
- The Right Side RHSV will be replaced with a spare assembly.
- Both Intercept Valves will be inspected.

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Auxiliary Turbine Valves

- The Ventilator Valve will be disassembled and inspected on site.
- The Equalizer Valve will be disassembled and inspected on site.
- The Heating Steam Feed Valve will be removed for IP Turbine disassembly and sent to Portersville Valve to be reconditioned.

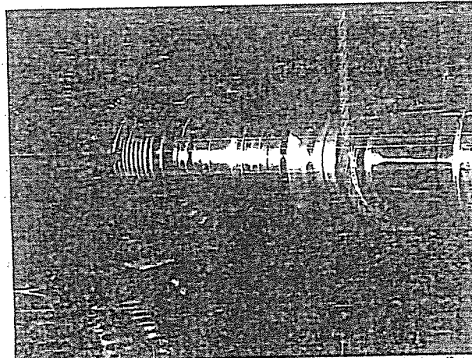
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HP Turbine

- First inspection since Dense Pack upgrade in 2005.
- The rotor will be inspected on site by SI.



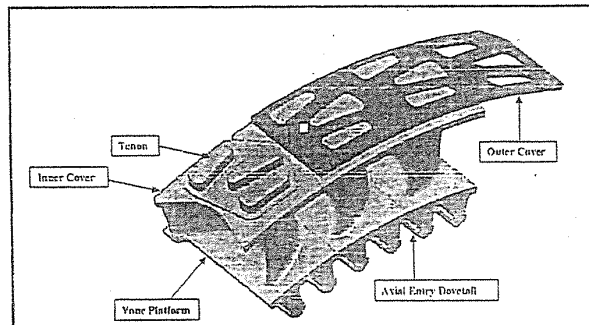
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HP Turbine - Buckets

- Stage 1 has an integral inner cover bucket with peed-on outer cover using axial-entry dovetail.
- Stage 1 bucket has HVOF coated for solid particle erosion protection.
- Designed to withstand partial arc operation during valve tests.

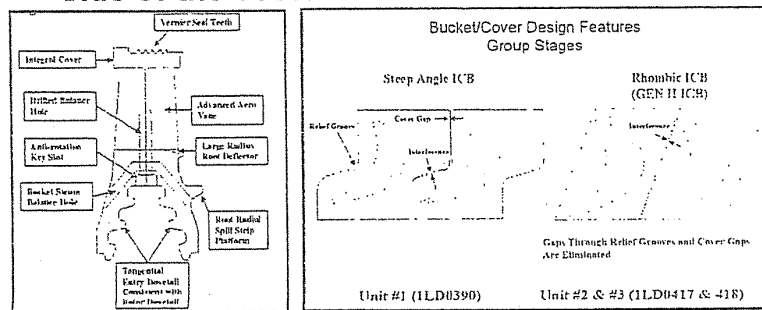


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HP Turbine - Buckets

- Unit 1 HP Turbine has Steeple Angle ICB on rows 2 -10, GE has had some issues with this design
- GE recommends additional MT on the under side of the covers



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HP Turbine - Packing

- On September 6, 2013 GE issued TIL 1909 (Re-roundable Packing Deformation) to alert customers about the problems with the GE packing rings installed in the Dense Pack HP turbine sections.
- All HP packing and spill strips will be replaced with Turbocare retractable packing.

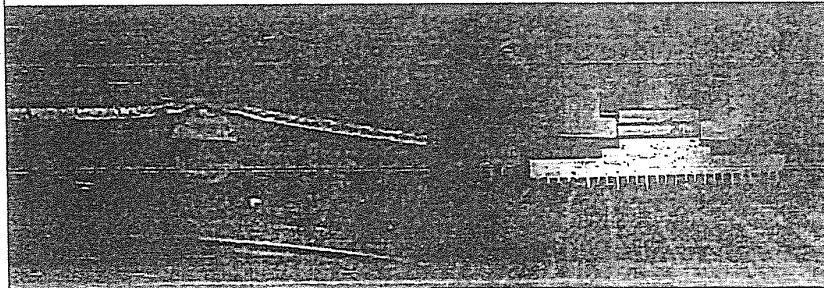


Figure 2: Re-roundable Packing and Rotor damage

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HP Turbine – Steam Path

- All HP Steam Path components will be grit blast on site by Arco and MT inspected by SI.
- Minor repair will be performed on site by MD&A.
- GE will perform a thermal and structural steam path audit.
- Deposits will be sent to Beta for analysis.
- HP-IP-LP steam path will be laser aligned by Turbine Laser Alignment LLC.

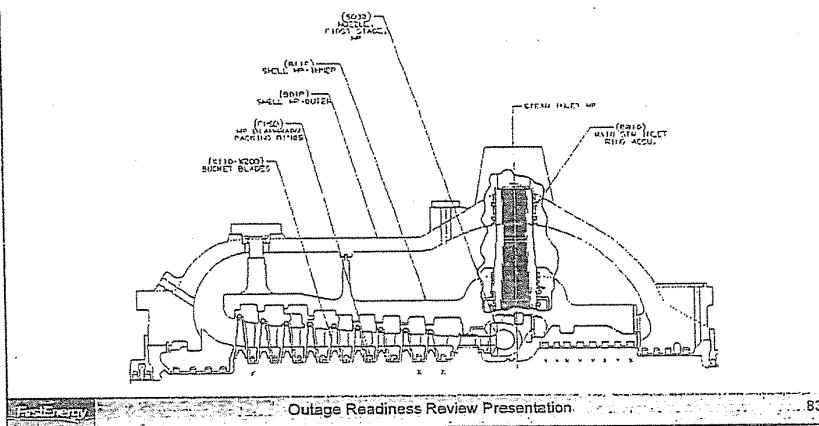


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HP Turbine - MSI

Four Main Steam Inlets will be inspected. Working with GE on contingency plans for spare parts.

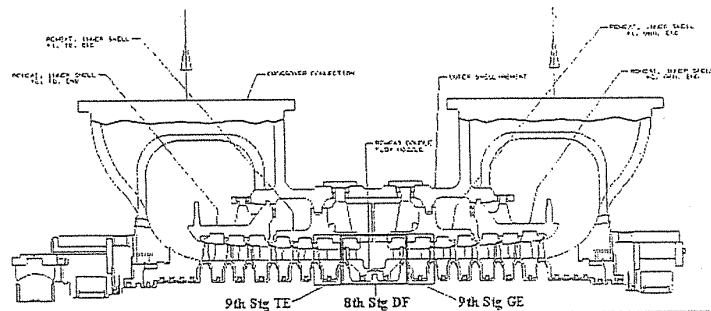


HP Turbine – Performance

- The accumulation of deposits in the HP turbine section affects the HP section efficiency by increasing the surface roughness and potentially reducing the area of the stationary nozzles.
- The cause of turbine deposits for the Bruce Mansfield HP turbine is generally accepted to be the accumulation of aluminum (sodium aluminum silicate hydrate which is silt from the Ohio River) which enters the cycle due to bypassing of water in the makeup demineralizers.
- The losses are generally recoverable by grit blasting the steam path.

IP Turbine - Rotor

- Rotor will be shipped to GE for 8th and 9th stage bucket replacement and LSB.
- Decision Tree for Rotor Runout issue, options include HSB and Rotor Straightening (Machine New Centerline)



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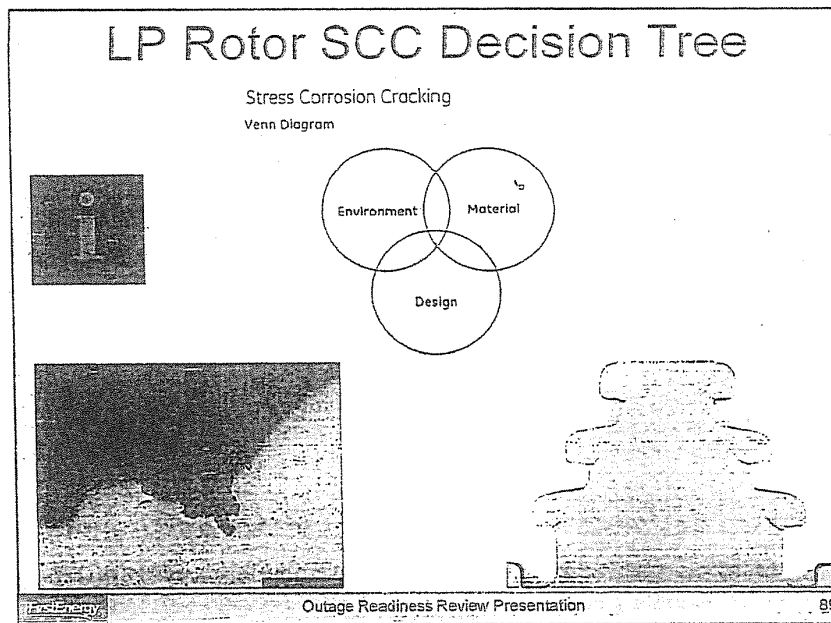
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IP Turbine – con't

- 8th Stage DF diaphragm will be sent to MD&A St. Louis shop for major repair due to SPE damage.
- MD&A will bring a boring bar on site to machine Reheat Inner Shells for the 8th Stage diaphragm fit.
- Stage 9 – 14 IP Diaphragms will be performed on site.
- The IP turbine retractable packing will be replaced like-in-kind and new spill strips will be installed


Outage Readiness Review Presentation

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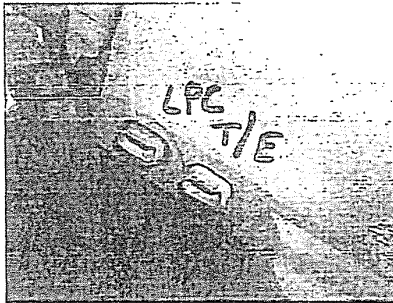


LP Turbines – con't.

One group of L-0 buckets will be removed from each end of the LPC rotor to inspect for SCC.



LPA, LPB, LPC L-0 Bucket Covers will be replaced on site and rotors will be slow speed balanced.



Outage Readiness Review Presentation 90

M116 Scope Details (Turbine)

BFP – BFPB- BFPT

- A visual inspection of the 1A and 1B BFPT Lufkin gearbox gear sets will be performed
- 1A BFPT will be overhauled by Mechanical Maintenance. The Spare BFPT rotor will be installed.
- The 1A HPSV, HPCV, LPSV and LP Valve rack will be inspected as part of the overhaul.
- The 1A BFPT Exhaust will be to the Adsco factory for replacement of the four internal expansion joints



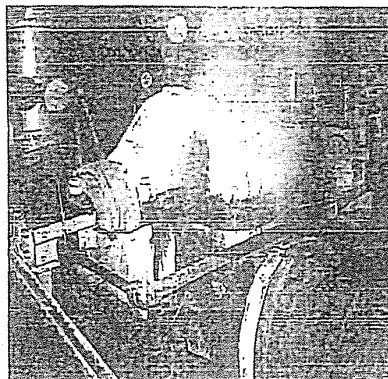
Outage Readiness Review Presentation

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M116 Scope Details (Turbine)

BFP – BFPB- BFPT

- The 1A BFP Booster Pump will be reconditioned due to casing leaks at the horizontal split joint.
- Mobile Maintenance will perform the work at the Canonsburg shop



Outage Readiness Review Presentation

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M116 Scope Details (Turbine)

Circ Water Pumps

- 1A, 1B, 1C Circ Water Pump bearings will be inspected and the pumps will be repacked during the M116 outage.

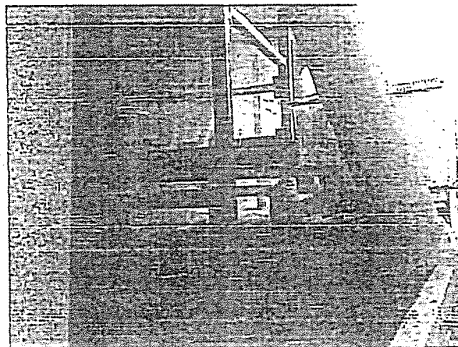


Outage Readiness Review Presentation

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Cooling Tower

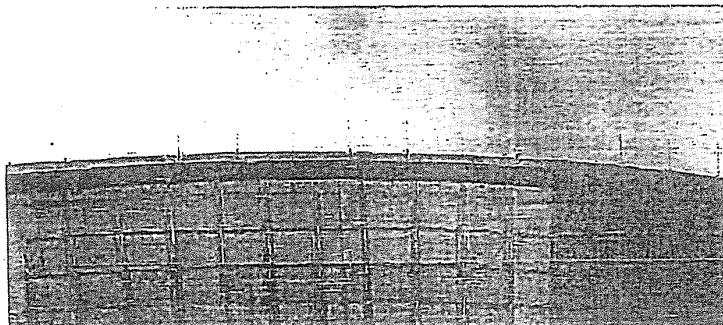
- The cooling tower basin will be drained and cleaned.
- Routine nozzle, fill, and drift eliminator repairs.
- Warm Water Bypass Piping will be replaced, currently out for bid.



Outage Readiness Review Presentation

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Cooling Tower



- Cornice will be inspected by NAES
- Repairs to the cornice and ladders have been deferred for several outages. Estimated cost to address all cornice and ladders issues is ~ \$500K, based on similar repairs made to U2 tower M213. Repair work is currently not funded.

Outage Readiness Review Presentation

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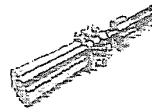
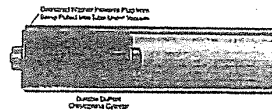
M116 Scope Details (Turbine) Condenser

- The condenser tubes will be cleaned by Conco with SS brushes.
- A condenser hydro will be performed with water level above the dogbone expansion joints.
- The Unit 1 condenser currently has 7.5% of the total tubes plugged. The corrosion rate is linear when comparing the result from the U1 2005 and 2008 inspections (and U2 and U3 results) and it should be expected to plug an additional 2 - 3% of the brass tubes during the 2016 scheduled outage if the eddy current inspection was performed

Outage Readiness Review Presentation

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Condenser tube plugs



The existing condenser tube plugs are becoming a reliability issue, and with the cancellation of the retubing projects, consideration should be given to performing a 100% ECT inspection, plugging all tubes with > 60% wall loss, and replacing all existing Conco EX3 plugs with the EST Pop-A-Plug CPI/Perma Plugs

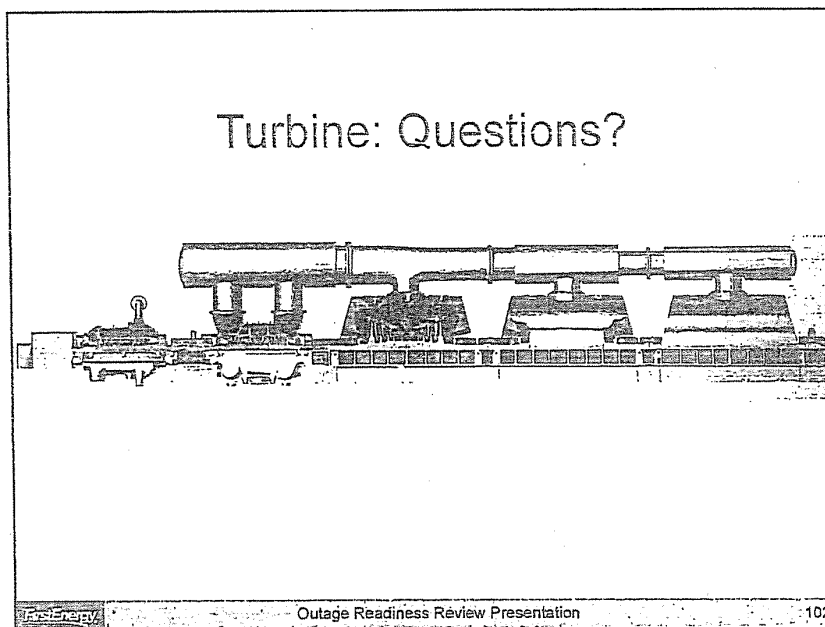
The existing tube plugs are Conco EX3 elastomer type plugs, recommend replacing with EST CPI perma plugs. In November 2005, 6.9% of the admiralty brass tubes were plugged, and an additional 757 tubes (3.2%) were plugged in 2008

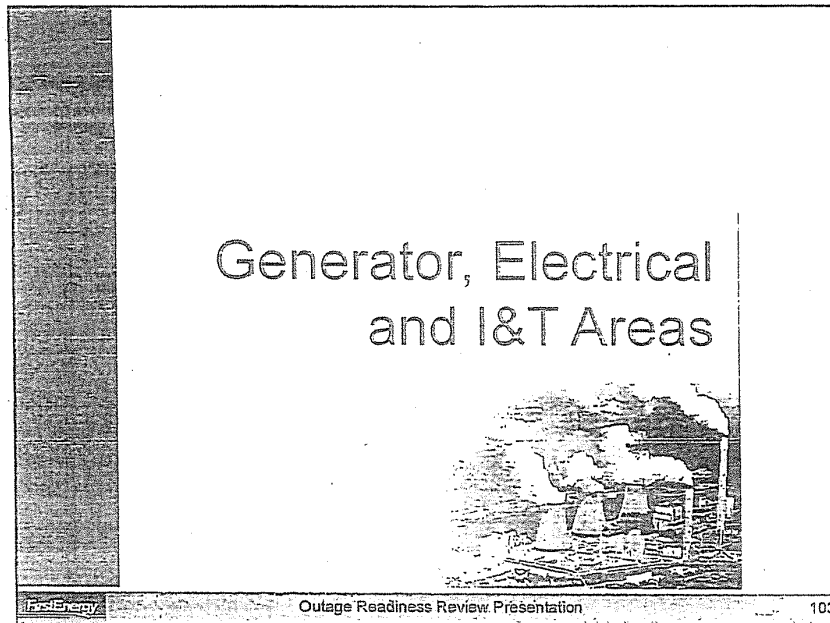
HES 100% ECT	\$142,000
Plugs - Material Cost	\$212,766
Plugging Labor	\$188,416
Contingency (20%) for extra plugging resulting from 100% ECT	\$108,636
Total	\$651,818

M116 Scope Details (Turbine) Drains Cooler

- The Drains Cooler is a single pass shell and tube type heat exchanger in the condensate system.
- The Drains Cooler will be opened by Mechanical Maintenance and 100% remote field inspected by HES.

Turbine Area Outage Risk Matrix				
Risks or Opportunities	Likelihood Percentage	Total Severity	Expected Value	Risk Indicators or Drivers (Include Dates, Amounts, Penalties, Costs, Etc.)
Condenser tube leaks due to extensive pitting and no ECT inspections and preventive plugging	100%	\$3M	\$3M	830 mw derate for 24 hours to plug one leaking condenser tube (24 hours x 830mw x \$25/mwhr x 100% risk x 6 occurrence = \$/year)
Turbine emergent work				
LP Rotor SCC	2%	\$6.5M	\$130K	Decision tree tool
Overhead crane breakdowns could delay turbine work	50%			
Outage Readiness Review Presentation				101





Electrical / I&T Budget

- **Electrical / I&T O&M - \$ 863,855**
 - Generator Maintenance & Stator Inspections - GE
 - Temporary Power & Lighting Support - Electrical
 - Turbine, Boiler and SO2 Instrumentation- I&T
 - 13.8KV & 4160V Breaker Reconditioning - Camco
 - Electromechanical Relay Calibration – Camco
 - Transformer Testing – FE Substation

Outage Readiness Review Presentation 104

This slide has a white background with a black border. The title 'Electrical / I&T Budget' is centered at the top in a large, black, sans-serif font. Below the title is a bulleted list. The first bullet point is '▪ **Electrical / I&T O&M - \$ 863,855**', which is bolded. Underneath this, there are six sub-bullet points, each preceded by a small square symbol: '▪ Generator Maintenance & Stator Inspections - GE', '▪ Temporary Power & Lighting Support - Electrical', '▪ Turbine, Boiler and SO2 Instrumentation- I&T', '▪ 13.8KV & 4160V Breaker Reconditioning - Camco', '▪ Electromechanical Relay Calibration – Camco', and '▪ Transformer Testing – FE Substation'. At the bottom of the slide, there is a thin horizontal bar containing the text 'Outage Readiness Review Presentation' and the number '104' on the right.

Generator Outage Scope

O&M BUDGET WORK

- Stator HIT Skid Testing – GE
- Bushing Box Inspections – GE
- MAGIC Internal Generator Inspection – GE
- Generator Bearings & Seals Inspections
- Hydrogen Cooler Tubes – Clean & Inspection
- Brush Rigging Inspection & Cleaning
- Exciter SCR panel PM's
- Functional Testing – Relay Protection Systems

FirstEnergy

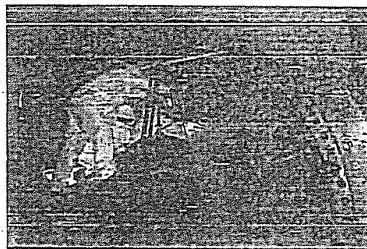
Outage Readiness Review Presentation

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Generator Outage Scope

Generator Inspections & Maintenance

- Stator Winding Integrity Tests
 - Bearing Inspections
 - H2 Seal Inspections
 - Oil Deflector Inspections
 - Electrical Tests on components
-
- Stator Bars replaced in 2008
 - Stator Leak repairs made in 2012
 - Field rewind in 2008
 - No shorted turns to date on the Unit 1 Generator Field
 - Flux probe testing planned prior to the start of the outage



FirstEnergy

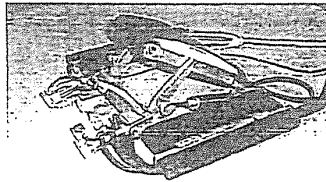
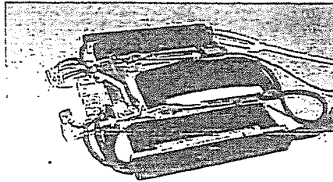
Outage Readiness Review Presentation

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Generator Outage Scope

MAGIC (Miniature Air Gap Inspection Crawler)

This service is for a tracked vehicle that carries high resolution video cameras to inspect the rotor and stator surfaces inside an electrical generator without the need of removing the field.



PG&E Energy

Outage Readiness Review Presentation

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Generator Outage Scope

Bushing Box Inspections

- During the 2008 outage, 6 HVB's had their flange gaskets repaired in place (GE 'Magic Dust' repair).
- GE's recommendation was to plan a project to have all the bushings removed, disassembled and rebuilt with new flange gaskets.

CE		
T1	T2	T3
OK	OK	Magic Dust
OK	Magic Dust	Magic Dust
T4	T5	T6
Doors	Doors	

Doors		
T4	T5	T5
OK	Magic Dust	Magic Dust
OK	Magic Dust	OK
T1	T2	T3
TE		

PG&E Energy

Outage Readiness Review Presentation

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Generator Outage Scope

Bushing Box Inspections

- During the 2012 outage, bushing box inspections did not show that the repaired areas were leaking and the remaining 6 bushings were also found to be in good condition. The decision was made to continue operation with the bushings and to monitor for H₂ leakage or signs of viscasil leakage during operation.
- Currently, there are no indications of H₂ leakage at the bushings when checked with a combustible gas monitor.
- Bushing box inspections during the outage will determine if there is any emergent O&M repair work to do in the bushing boxes.
- Only completely replacing bushings would be covered as a capital project. BMP maintains 3 spare generator HV bushings.

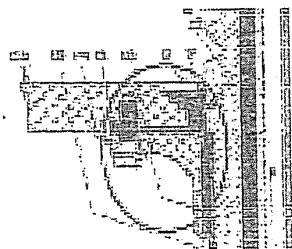
109

Outage Readiness Review Presentation

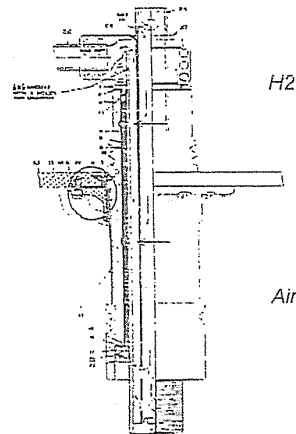
109

Generator Outage Scope

Bushing Box Repairs



Flange Repair Area



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Outage Readiness Review Presentation

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Generator Outage Scope

2012 Stator Leak Repair

- During the 2012 outage, series loop #8 plumbing connection on the collector end had a leak repaired at the copper elbow to tee connection.
- Prior to 2012 since the 2008 rewind, the SLMS was slowly trending upward indicating a stator leak.
- Since the 2012 outage, the SLMS has remained steady at near zero for daily losses of H2.
- At this time, we do not anticipate having to make any stator leak repairs during the 2016 outage.



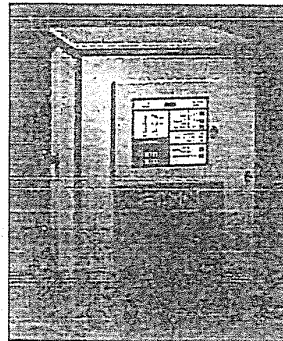
Outage Readiness Review Presentation

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Generator Outage Scope

Core Monitor Replacement Project

- The U1 Generator Core Monitor is planned to be replaced with a current model E-One unit as a capital project.
- Both units 2 and 3 have been replaced during recent outages.
- The existing unit is outdated and no longer supported by the OEM.



Outage Readiness Review Presentation

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Generator Risk Matrix				
Risks or Opportunities	Likelihood Percentage	Total Severity	Expected Value	Risk Indicators or Drivers
Generator Stator Bar Leaks	10%	\$500K	\$50,000	Repairing a stator leak is not expected. SLMS readings have not indicated any leakage since prior to M112.
Generator Bushing Box Repairs	25%	\$500000	\$150,000	6 of the 12 generator HVB's have had the flange gaskets repaired in place. No repairs were required in 2012.

Outage Readiness Review Presentation 113

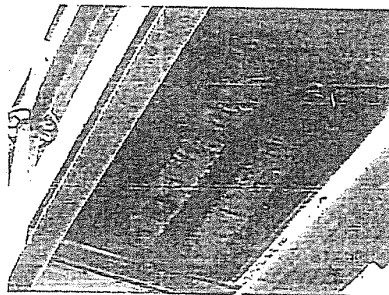
Electrical Outage Scope	
O&M Budget Work	
<ul style="list-style-type: none"> ▣ Temporary Power Support ▣ Transformer Delink & Relink ▣ Critical Circuit Testing / Battery Load Test ▣ Plant Electrical Bus Relay Calibration ▣ 18KV, 13.8KV and 4160V Bus Testing ▣ Major Motor PM's 	

Outage Readiness Review Presentation 114

Electrical Outage Scope

O&M Budget Work

- Test the 18KV Isophase bus, 13.8KV and 4160V Normal non segregated buses.
- Inspect access ports for trapped moisture.
- Significant repairs to covers made during M112.



115

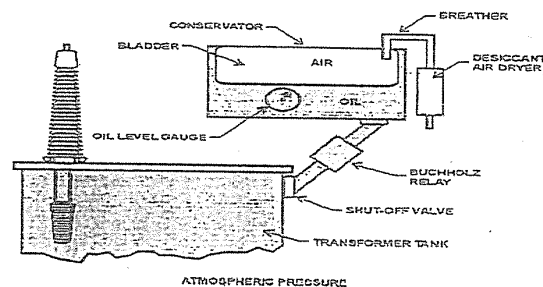
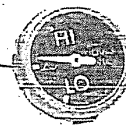
Outage Readiness Review Presentation

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Electrical Outage Scope

O&M Budget Work

- GSU and Auxiliary Transformer Testing
- PM work on Alarms, Pumps and Fans



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Outage Readiness Review Presentation

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Electrical Outage Scope

GSU Bushing Replacement Project

- The North 345KV bushing was found low on oil in May 2014.
- Oil was added to the bushing and the level has been monitored regularly since then.
- A capital project is planned to replace the bushing during M116.

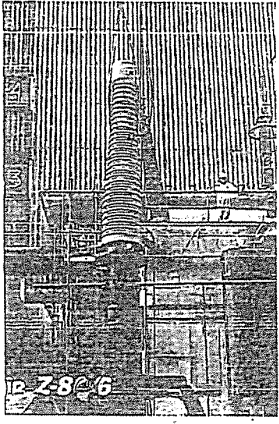


FastEnergy Outage Readiness Review Presentation 117

Electrical Outage Scope

GSU Bushing Replacement

- GSU will be totally drained for replacing the bushing.
- While empty, a visual inspection of internal will be done.
- Plant maintains one GSU HVB in stock.
- An additional bushing will be purchased prior to the outage for the replacement.
- Support from FE substation engineers will be utilized when reviewing inspection results and testing data.




FastEnergy Outage Readiness Review Presentation 118

I&T Outage Scope

O&M Budget Work

- Critical Boiler & Turbine instrument calibration & PM's
- Turbine Control Valve support
- SO2 area Preventative Maintenance work
- Igniter Maintenance & Repairs
- Condenser Hydro Support




Outage Readiness Review Presentation

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I&T Outage Scope

O&M Budget Work

- Support to any valve operator work as needed
- Critical Circuit Testing Support (Boiler Trips)
- Support Fire Protection System Testing and repairs

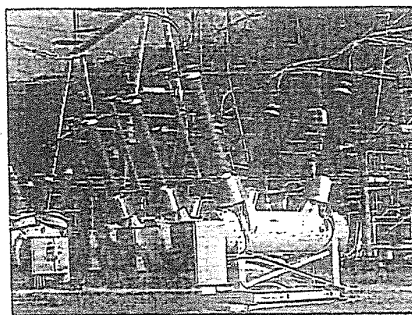


Outage Readiness Review Presentation

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BMP Substation Outage Work

- Expand Boundaries for Testing and Planned Work
- Replace B30 and B34 Generator Breakers
- Critical Trip Circuit Cable Testing (DC Megger)
- Protective Trip Circuit Functional Testing



Outage Readiness Review Presentation

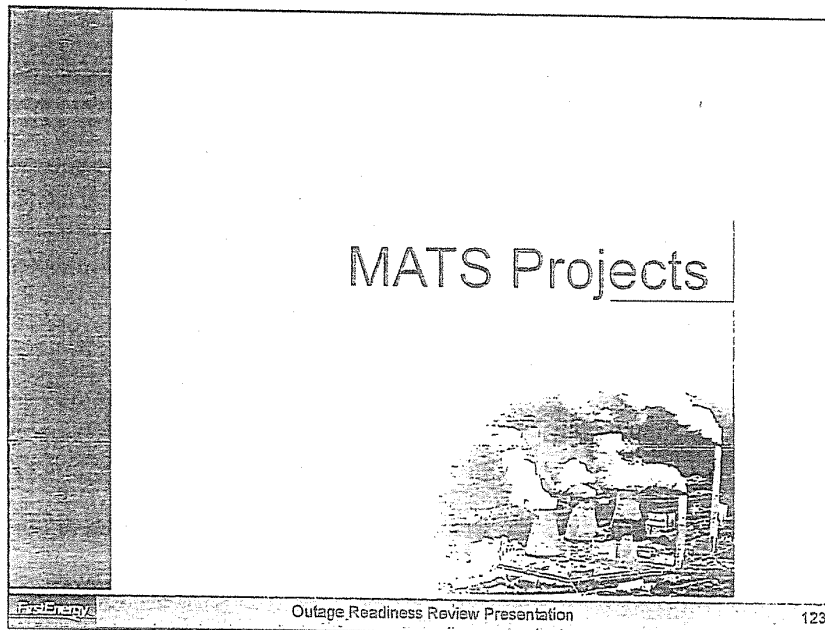
121

Generator, Electrical and I&T Areas

Questions?

Outage Readiness Review Presentation

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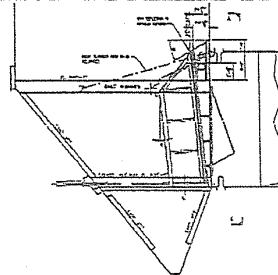
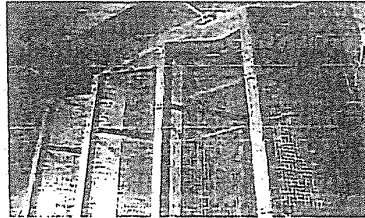


MATS Budget	
▣ LPA Screens	• Capital : \$2,367,825 MATS Budget
▣ Economizer Ash System	• Capital : \$4,893,156 MATS Budget
▣ Controls & Monitoring (CO-O2 grid, pH probes)	• Capital : \$384,571 MATS Budget
▣ NH3 re-injection system (tie-ins)	• Capital : \$657,720 MATS Budget
▣ Hg re-emission chemical injection system (tie-ins)	• Capital : \$750,547 MATS Budget

The slide contains a table with the title "MATS Budget". It lists five categories of projects, each with a corresponding capital cost in the MATS Budget. The categories are: LPA Screens, Economizer Ash System, Controls & Monitoring (CO-O2 grid, pH probes), NH3 re-injection system (tie-ins), and Hg re-emission chemical injection system (tie-ins). The slide has a dark vertical bar on the left side. At the bottom, there is a footer with the "In-Service" logo on the left, the text "Outage Readiness Review Presentation" in the center, and the number "124" on the right.

LPA Screens: Work Scope

- Install Large Particle Ash (LPA) screens at Economizer Outlet
- Install new economizer hopper access doors and platforms
- Install eight pneumatic rappers
- Tie in LPA screen rapper controls to DCS
- Requires internal boiler wash in the backpass
- Applying Unit 2 & 3 lessons learned to project execution and design



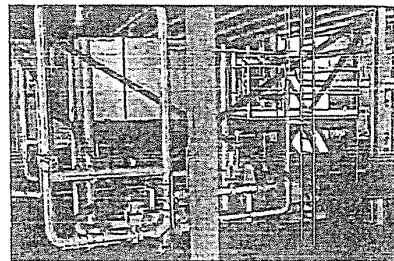
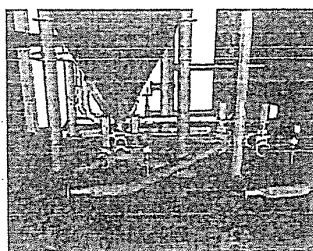
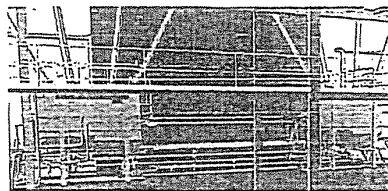
ProEnergy

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Economizer Ash: Work Scope

- Install new economizer ash removal system
 - 8 drop pipes feeding 2 storage tanks
 - Sluice water tank, pumps for makeup
 - Larger slurry tank
 - New DCS cabinets for controls
- Applying Unit 2 lessons learned to project execution and design



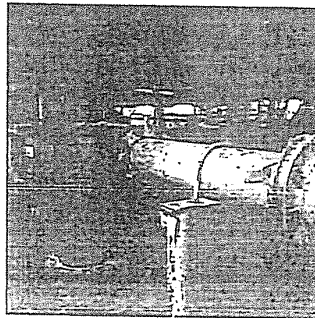
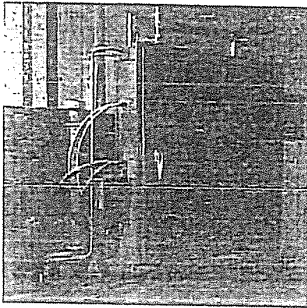
ProEnergy

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Controls & Monitoring: Work Scope

- Install 8 point CO-O2 grid on SCR Outlet
- Install redundant scrubber pH pots and transmitters
- pH transmitters will also have capability to read ORP



Outage Readiness Review Presentation

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Other MATS Projects

- Ammonia re-injection system
 - Unvaporized ammonia/water collects at bottom of SCR vaporizer duct. Results in slugs of liquid to AIG, impacting SCR performance.
 - System will drain excess liquid, pump, and re-inject into SCR inlet duct
- Hg re-emission (MRE) system
 - Chemical injection of NaHS to prevent dissolved Hg in scrubber liquor from re-emitting as elemental Hg
- In design. Mostly non-outage. Have outage tie-ins.



Outage Readiness Review Presentation

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Equipment Delivery and Engineering

- Engineering/Drawings
 - IFC Structural/Mechanical 11/16/15
 - IFC Electrical 1/8/16
- Equipment
 - LPA Screens
 - Steag screen material on site
 - Steag screen frames and rappers delivered Dec 2015
 - Other material delivered Dec 2015 and Jan 2016
 - Economizer Ash
 - UCC material delivered Dec 2015, except slurry tank delivered Jan 2016
 - ABB DCS cabinets delivered Dec 2015
 - Other material delivered Dec 2015 and Jan 2016
 - Controls & Monitoring
 - Delta CO-O2 material delivered Dec 2015
 - Clarkson isolation valves delivered Dec 2015
 - Nadine pH pots and Foxboro pH sensors and transmitters delivered Jan 2016
- Construction
 - Mechanical: ENERFAB has begun fabrication and install
 - Electrical: Yates to begin after IFC package issued



Outage Readiness Review Presentation

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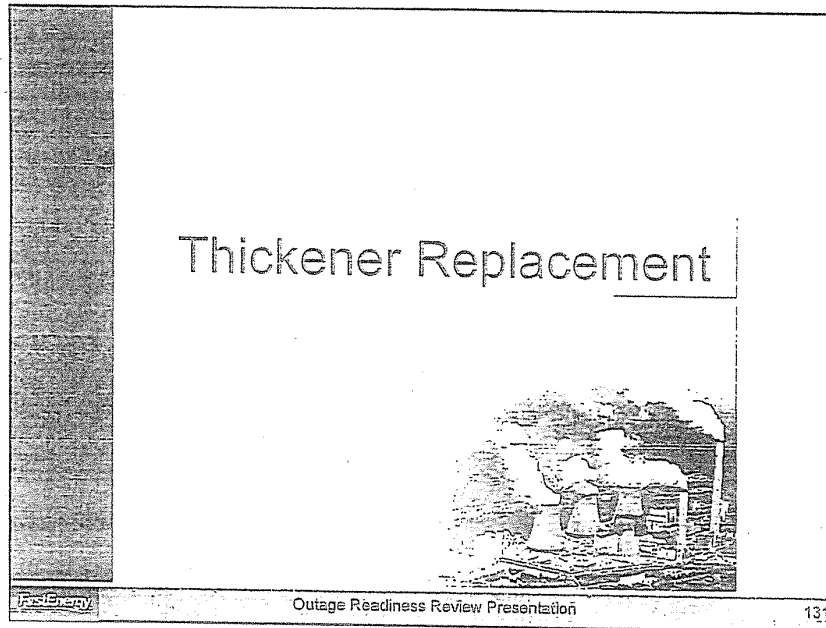
Risk Assessment

- Interferences / Coordination
 - Back Pass and external boiler wash
 - Economizer replacement
 - Air heater basket replacement
 - Boiler Back Pass inspections and repairs
- Risks
 - Schedule impacts due to emergent work scopes, such as duct repairs
- Mitigation Actions
 - Review the schedule in detail to identify any interferences
 - Complete as much of economizer ash system as possible prior to outage



Outage Readiness Review Presentation

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Thickener Rake Replacement

- Thickener Rake Replacement (49 days)
 - Cleaning (11 days) – Working 24/7 (2- 12 hour Shifts)
 - Demo (6 days) – Working 6 – 10's x 2 Shifts
 - Install (26 days) – Working 6 -10's x 2 Shifts
 - Fill Thickener (6 days)

The slide footer contains the "PacifiEnergy" logo on the left, the text "Outage Readiness Review Presentation" in the center, and the number "132" on the right.

Thickener Project Contractors

- Enerfab Aycock: Demo and Install New Rake
- Enerfab: Unload materials, clean thickener
- Brand: Scaffolding
- Burnham: Lead Abatement
- C&K: Cut Access Holes
- Avalotis: Repair thickener lining at access holes
- R.E. Yates: Temporary Light and Power



Outage Readiness Review Presentation

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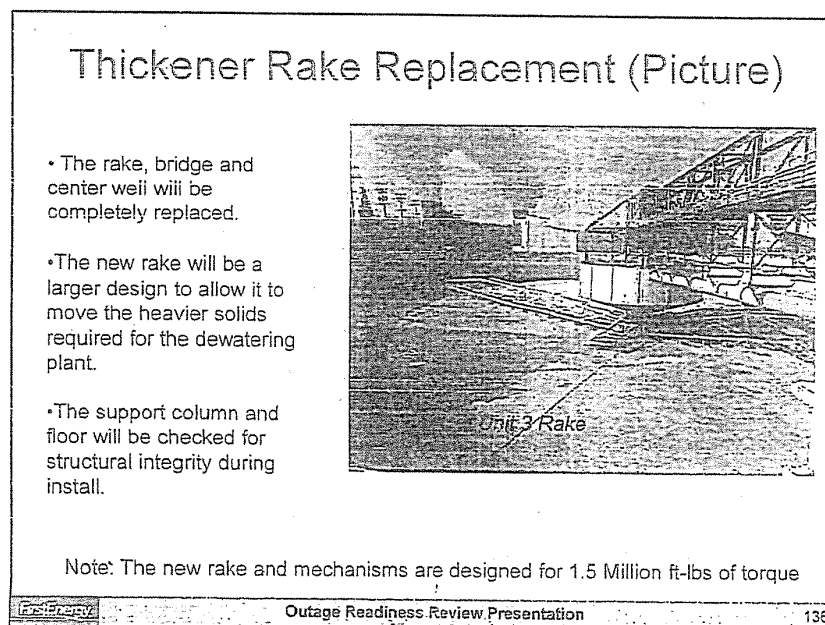
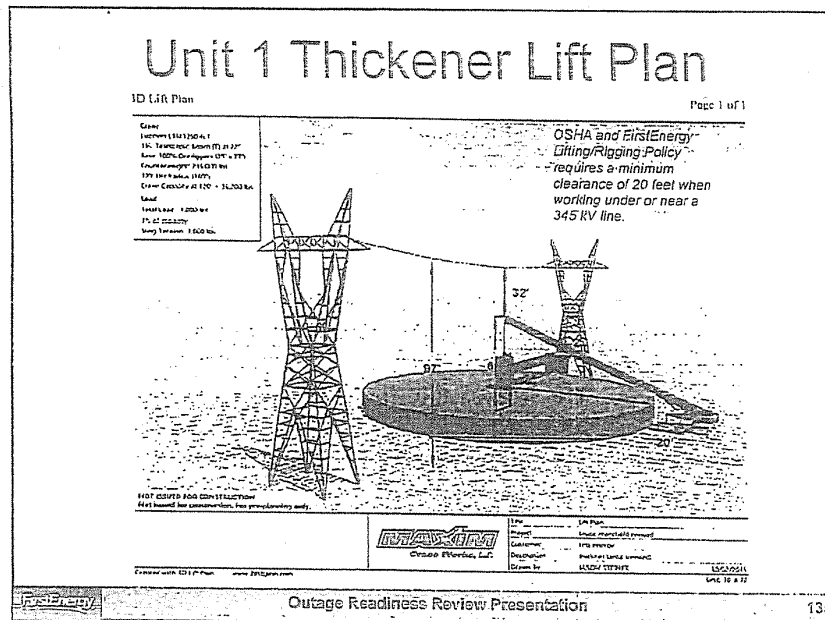
Thickener Rake Replacement

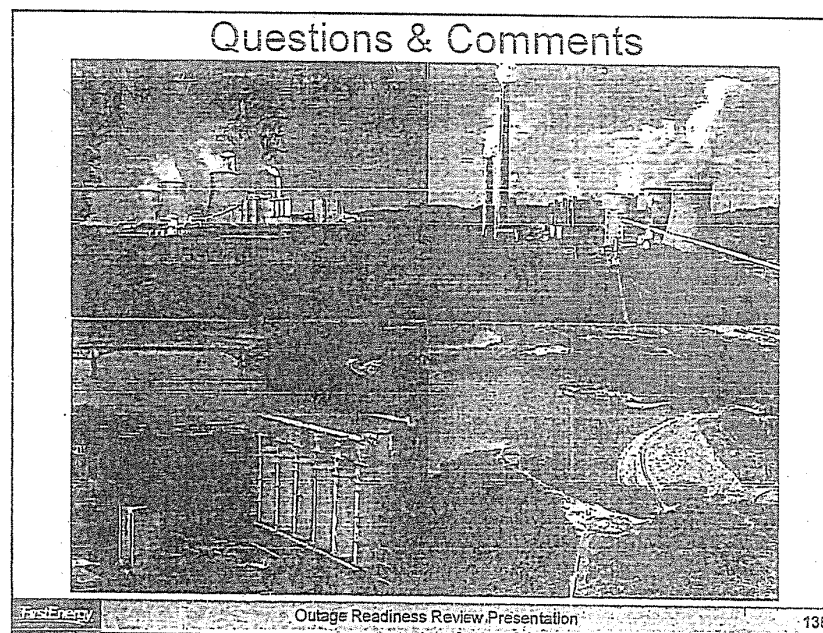
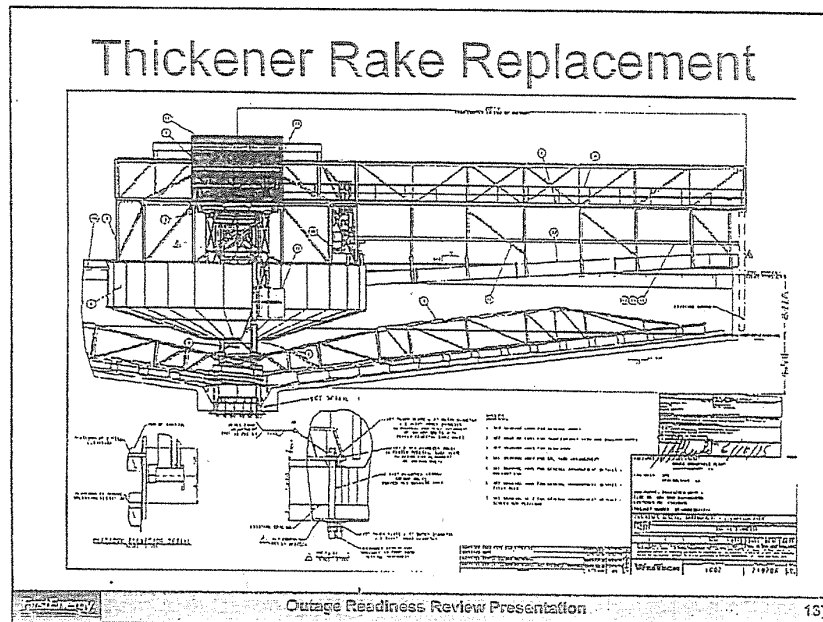
- Scope Description
 - Thickener Rake Replacement, an upgrade for the dewatering facility requirements.
- Interferences with Other Work
 - Cleaning the Thickener
 - 3.5 million gallons of liquid/CCB material need to be pumped to LBR
- Risks
 - Delays in the cleaning activities due to equipment limitations.
 - Close proximity to overhead 345kV lines
 - Safety of crane/lifting activities during demo/install
- Mitigation Actions
 - Applying Unit 3 lessons learned to project
 - Stage trash pump to send clarified liquor to Unit 2 thickener following shutdown to maximize pump down rate.
 - Dedicating 'A' underflow line and 'A' mix tank for thickener cleaning.
 - Rental pump will be used in place of one of the underflow pumps.
 - Contractor to develop and submit lifting plan which meets or exceeds FirstEnergy rigging/lifting guidelines
 - Crane placement selected to maximize distance to lines
 - Boom lift stops, alarms, and/or spotters will be utilized to limit boom travel (Need to verify)



Outage Readiness Review Presentation

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Review of Action Items			
Item #	Action Item Description (What needs done?)	Assigned To	Due Date
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

Outage Readiness Review Presentation 139

Material and Offsite Log								
Work Order	Description	Vendor	Lead Time	Expected Delivery Date	Purchase Order	PO Requestor	Shop Visit	Resp Person
101152617	Oil Deflectors	RPM	3 Weeks		47557492	Tom Cowher	Yes	TBD - Turbine Fleet Services
101152617	Turbine Bearings	RPM			47597378	Tom Cowher	Yes	TBD - Turbine Fleet Services
101147500	CV1 and CV2 Turbine Control Valves	Orbital Energy Services			47606136	Tom Cowher	Yes	TBD - Turbine Fleet Services
101152670	IP Turbine Rotor	GE - Schenectady NY			45480605	Tom Cowher	Yes	TBD - Turbine Fleet Services
100536397	MSV Hydraulic Actuators	United Serve Hydraulics			45480958	Tom Cowher	Yes	TBD - Turbine Fleet Services
100539803	1A BFPT Exhaust Expansion Joint	Adisco			45483391	Tom Cowher	Yes	TBD - Turbine Fleet Services
101365078	1A BFPT Booster Pump	TBD				Tom Cowher	Yes	TBD - Turbine Fleet Services
100538572	IP 8th Stage DF Diaphragm	MD&A - St. Louis	4 weeks		TBD	Tom Cowher	Yes	TBD - Turbine Fleet Services
100538572	8th Stage DF Diaphragm Pre-Warming Pipe Flange	MD&A - St. Louis	4 weeks		TBD	Tom Cowher	Yes	TBD - Turbine Fleet Services

Outage Readiness Review Presentation 140

Overall Outage Risk

- Filling vacancies in outage team org chart.
- Discovery phase of boiler condition to determine scope vs. budget. Inspection of turbine rotors (outage extension)
- Assessment of condenser (unfunded)
- Balance of Plant Repairs to reduce derates. (funding).



Outage Readiness Review Presentation

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Red-Line Projects

Projects with Reduced Funding to Meet Budget	
SO2	
ID Fan and Motor PMs	No funding for material cost
BOP	
Pulverizer/Feeder/Bunker Repairs	\$10,000 per pulverizer budgeted. Target would be \$40,000 per pulverizer and \$90,000 for tube oil system upgrade.
FD and PA Fan and Motor PMs	No funding for material cost
DA Level Control Valves	No funding for material cost
Feedwater Heater Level Control Valves, Dump Valves	No funding for material cost
Electrical R&T	
Breaker PMs	No funding for material cost
Instrumentation PMs	No funding for material cost
Internal Boiler	
Refractory Repairs	No funding
Reheater Repairs (Shields, Alignment Bars, etc)	No funding
Air-In Leakage	No funding
Mix Area Membrane and Refractory	Mix area is a significant cause of additional tube leak scope during forced outage due to small membrane leaks. Will be inspected but repair scope will focus on major waterwall failure areas.
Penthouse Seal Repairs	No funding
Economizer Outlet Duct Sinter Repairs	No funding
Windbox Repairs	No funding
Boiler Insulation Repairs	No funding
Expansion Joints	No funding
Turbine / Generator	
LP Rotor SCC	No funding, no contingency plan.
Generator Stator Leaks	No funding
Condenser Tube Assessment	No funding



Outage Readiness Review Presentation

142

M116 Outage**Job Outline for DWF CT-004 Work Scopes**

- 1) Thickener influent pipe (tie-in to existing pipe & distribution box)
 - a) Tag-out of all existing feeds to distribution box (& re-route where necessary)
 - i) SO₂ Area Sumps
 - ii) Flocculent
 - iii) Bottom Ash Wastewater
 - iv) FOG Return (Previously blanked and demolished, no tags required)
 - b) Demolition of 24" influent pipe and support steel
 - c) Tie-in feeds from prefabricated headers to new influent pipe after new influent piping is installed as part of WesTech thickener rake replacement scope
 - i) FOG Return
 - ii) Reclaim Water
- 2) SO₂ Area Sump Pump Replacement
 - a) Tag out main power feeds to A & B sump pumps
 - b) Build access (Brand) and clean sump pit (Enerfab / MPW)
 - c) Install new sump pumps in pit
 - d) Tie-in new VFD Drive & run new power feeds to pumps (Bruce & Merilees)
- 3) Bleed Piping
 - a) Demolition of existing bleed piping from 24" recycle header of each vessel to SO₂ Area Sump
 - b) Blank existing 6" nozzle
 - c) Tie-in new 8" nozzle and run new piping to SO₂ area sump, including valve installation at concrete deck
 - i) Note: Project Engineering has cut the installation of density meters from the scope of this project
- 4) Underflow piping, flush water & supports
 - a) Tag out existing pumps & demo existing discharge piping following completion of thickener tank cleaning
 - b) Install new piping, including new isolation valves, from thickener tank nozzles to pumps and from pump discharges to prefabricated header in tunnel
 - i) Relocate existing density meter
 - c) Tie-in prefabricated header to existing header in pipe rack
- 5) Transfer Water Pump & Header Replacement
 - a) Tag out both transfer pumps
 - b) Demo existing pumps and motors
 - c) Install new pump skids and wire motors
 - d) Tag out transfer water tank influent feeds, etc.
 - i) Thickener tags for overflow water
 - ii) Make-Up Water Feeds
 - iii) Thiosulfate injection
 - iv) Crossover to U2
 - e) Cut out existing transfer water pump suction nozzle and install new larger nozzle
 - f) Repair coating in transfer tank
 - g) Tie-in new piping to suction and discharge of pump
 - h) Demo existing transfer water to make-up feed header inside basement of scrubber building
 - i) Install new make-up header, valves and hoses to each scrubber vessel



76 South Main Street
Akron, Ohio 44308

To members of IBEW Local 272:

We have been bargaining with your local union in an attempt to reach an agreement on a new collective bargaining agreement since December, 2013. Over the course of the last twelve months, we have given your negotiating committee multiple proposals including two (2) separate Comprehensive Offers of Settlement. Based on our inability to reach an agreement over nearly two (2) years of bargaining, we have notified your union leadership that we are implementing the terms of the Company's last comprehensive offer to settle.

Our objective in these negotiations has been to keep the Bruce Mansfield plant in a competitive position moving forward. We have asked to establish work rules that allow for operational flexibility in times of low demand and/or low market prices for power. In exchange, we have offered what we consider to be more than competitive wage and benefit package. Key points of the offer are:

1. Wage adjustments upon contract ratification as follows:
 - a. An equity adjustment of \$1.00 per hour for each classification (upon contract ratification).
 - b. A General Wage increase for all classifications of 5.5% (upon contract ratification). This would be calculated after the \$1.00 per hour equity adjustment is applied.
 - c. An additional General Wage increase of 2% one year following ratification of the agreement.

(Note: Ratification means that the contract has been approved by the union in accordance with their bylaws/constitution)

2. An increase in Sunday shift premium to \$2.05 per hour upon ratification, afternoon shift premium to \$1.50 upon ratification and night shift premium to \$1.55 upon ratification.
3. To assist with saving for health care expenses in retirement, beginning in 2016, an annual lump sum payment of \$500 will be provided for those enrolled in single health care coverage or those who waive coverage. A \$1,000 lump sum payment will be provided for those enrolled in the other 3 tiers of coverage. Payment will be made into the employee's Health Saving Account if they are enrolled in the FirstEnergy Consumer High Deductible Health Plan. If the employee is enrolled in a union sponsored health plan or waives coverage, payment will be made into their 401(k) plan or paid as cash, if elected.
4. Company provided health care contributions consistent with the amount FirstEnergy provides to other employees.

03/01/18

CASE NAME

CASE NO.

REPORTED TWO

DATE

NO. OF PAGES

EXH NO.

4

Appendix000550

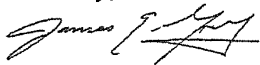
EXHIBIT NO. 604 RECEIVED ☒ REJECTED ☐
CASE NO. ^{or CA-16323} CA-1769 CASE NAME FirstEnergy
NO. OF PAGES 2 DATE 8/1/18 REPORTER JAO

5. Work rule changes to allow the plant to operate in a more flexible manner to increase our competitive position.

The Company's latest offer remains on the table. A summary of the implemented terms along with the actual implementation document is attached for your review. We wanted to make sure you understood the terms you will now be working under.

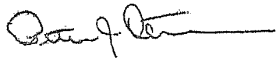
We will continue to share information with you so you have all of the facts. Thank you for your attention and as always, thank you for your dedication to continue working safely.

Sincerely,



Jim Graf
Director, Mansfield Plant

Sincerely,



Pete Kotsenas
VP Central Fleet

2017 Unit #2 Outage – Proposed Contracting Out Summary

Hello All,

Today's meeting is to discuss the Unit 2 2017 outage plan. This plan is subject to change based on financial changes that occur over the next several months. Any changes will be reviewed with the union.

We are currently planning to staff the outage with plant resources in the following manner. Overtime during the outage will be handled using the existing call out list so all employees will be eligible to work overtime throughout the outage.

Department	Total available resources	Resources assigned to the M217 outage	Resources assigned to the running units	Total hours available for outage (60 hrs/week)
Maintenance	52	24	28	11,520
Electrical	18	12	6	5,760
Instrument & Test	14	8	6	3,840

We are planning to have mobile maintenance perform the turbine inspection. Enerfab will perform our general mechanical work during the outage. We are also planning to have Brand, MPW, Burnham, and FQS onsite as our main support contractors throughout the outage. Yates will be our primary electrical contractor during the outage. The dewatering team will be performing tie in work and the unit 2 thickener upgrade during the M217 outage. We have attached an itemized this of all the planned work for the M217 outage.

EXHIBIT NO. RECEIVED

CASE NAME ON PAGE

REPORTER JAC DATE 23049 70 01

G.C. EXH. NO. 5

EXHIBIT NO. 605 RECEIVED ☒ REJECTED ☐

^{DU-CA-103303}
CASE NO. DU-CA-170901 CASE NAME FirstEnergy

NO. OF PAGES 2 DATE 12/1/16 REPORTER JAO

The chart below is a summary of the man hours by area base on the current plan.

Row Labels	Sum of Total Hours
Electrical Contractor	1184
Inspections	6128
Insulation	4692
Mechincal Contractor	88499
MNBLR	5932
MNELECT	6010
MINI&T	3516
MNSO2	2416
MNTURB	2840
Sandblasting	15960
Scaffolding	24643
Specialty Contractors	9344
Vac Services	2340
MOBILE	32220
Grand Total	205724

The table shows the planned man-hour breakdown based on work we performed in the past.

Departments	Work to be performed by local 272	Work to be contracted out	Work to be contracted and not historically performed by local 272
MNBLR	5916	16	
MNELECT	5676	334	
MINI&T	3516		
MNSO2	528	1888	
MNTURB	2536	304	
Electrical Contractor		1184	
Inspections			6128
Insulation			4692
Mechanical Contractor		7420	81079
Sandblasting			15960
Scaffolding			24643
Specialty Contractors		840	8504
Vac Services			2340
MOBILE		32220	
Grand Total	18172	44206	143346



International Brotherhood of Electrical Workers Local 272

838 A Midland Avenue • Midland, PA 15059 • Phone 724-643-4210

February 10, 2016

To: Bruce Mansfield Contractor/Outage Coordinator

Dear Sir:

This is a reaffirmation letter of the company's obligation to provide all information, upon request by Local 272, for contractors working at the Bruce Mansfield Plant. This would include:

- Name
- Number of employees
- Estimated man/hours
- Wages
- Material costs

(But not limited to).

This letter is also a formal request for all information from the paragraph above for the Unit One Outage.

Thank you for your cooperation in this matter.

Sincerely,

Herman Marshman Jr.
President IBEW Local 272

Cc: Charles Cookson, James E. Graf

E.C. EXH. NO. 6

EXHIBIT NO. G26 RECEIVED ✓ REJECTED

^{06-CA-170303}
CASE NO. 06-CA-170991 CASE NAME FirstEnergy

NO. OF PAGES 1 DATE 12/1/16 REPORTER JAO

Appendix000557



Bruce Mansfield Plant
P.O. Box 128
Shippingport, PA 15077-0128

724-643-5000

Herman Marshman, President
I.B.E.W., Local Union No. 272
838 Midland Avenue
Midland, PA 15059

March 14, 2016

Re: Response to Information Request Unit One Outage.

Dear Mr. Marshman,

Pursuant to your request, please see attached planning report for the upcoming Unit One Outage.

As per our established past practice, the Company has historically not provided contractor data for outages. This data is being provided to you on a non-precedent setting basis.

If you should have any questions regarding the attached information please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Christopher Cox".

Christopher Cox
Manager, Maintenance

CERTIFIED RETURN RECEIPT REQUESTED
7012 1640 0000 7419 1973

cc: JEGraf
RMGoebel
TGianatasio
CCookson

G.C. EXH. NO. 7

Appendix000558

Order	Oper. Work Center	Description	Estimated Man-hours
101152481	MPW	HP Water Clean East & West TLO coolers	10.0
100538564	GE	HP Rotor inspections & O&M repairs M116	240.0
100538568	GE	JP Rotor inspections & O&M repairs M116	160.0
100538571	MD & A	MD&A Major repairs to IP Diaphragms M116	720.0
100538572	MD & A	MD&A Recondition IP Warm-up snout M116	720.0
100538606	BRAND	Install dust control curtain M116	200.0
100538625	BRAND	Brand Scaffold Support for Turbine Overhaul	3,434.5
100539798	BURNHAM	1A BFPT insulation remove/install M116	370.0
100539803	ENERFAB	Install Ex. Joints 1A BFPT Exhaust M116	504.0
100560513	ENERFAB	1A HP Htr Inlet Bypass Vlv RR M116	48.0
100560520	ENERFAB	1B HP Htr Inlet Bypass Vlv RR M116	54.0
100560521	ENERFAB	3B HP Htr Outlet Bypass Vlv RR M116	54.0
100731912	GE	HP inlets and seal ring repairs M116	80.0
100847677	CONCO	Conco U1 Condenser tube cleaning M116	240.0
101152399	ARCO	Minor repairs to LP Diaphragm (on site)	320.0
101152485	GE	GE-IT: RVI Turbine Lube Oil Piping	40.0
101177531	BURNHAM	M116 Burnham Bottom Ash Overhaul	440.0
101177550	ENERFAB	Enerfab MN1 Bottom Ash Seal Skirt/Screen	1,617.0
101177553	BURNHAM	Burnham MN1 Bottom Ash Seal Skirt Laggin	260.0
101313992	PORTERSVILLE	Install new Warm Water BY-pass vlv	504.0
101395291	ENERFAB	Enerfab Stage MN1 LPA Screens	17.0
101415565	AVALOTIS	M116 Avalotis for all FAC/HEP Sandblast	1,500.0
101417284	ENERFAB	M116 Enerfab Econ Drop System Install (A	120.0
101417285	BURNHAM	M116 Burnham LPA Screens Support	679.0
101417286	BURNHAM	M116 Burnham Econ Drop System Support	1,839.0
101417289	ENERFAB	M116 Enerfab LPA Screens Unloading Overh	188.0
101417290	YATES	M116 Yates Econ Drop System Support	197.3
101417291	ENERFAB	M116 Enerfab LPA Screens Install (LPA Un	120.0
101417298	YATES	M116 Yates LPA Screens Support	1,575.0
101417299	ENERFAB	M116 Enerfab MATS Monitoring Install	100.0
101417301	BURNHAM	M116 Burnham LPA Screens Overheads	211.0
101417305	ENERFAB	M116 Enerfab Econ Drop System O&M Remova	220.0
101418572	ENERFAB	U1 IGNITOR GUIDE TUBES NEED REPAIRS	80.0
101419030	ENERFAB	ENERFAB REPLACE E&W SPRHT SPRAY BLK VLV	400.0
101419031	ENERFAB	M116 ENERFAB REPLACE W.SPRHT SPRAY ISO V	120.0
101419032	BRAND	M116 BRAND EXTERNAL BOILLER MISC SCAFFOL	560.0
101419060	ENERFAB	M116 Enerfab Waterwall Removal Labor	1,350.0
101419061	BRAND	M116 Brand WW Scaffolding Rental	1,440.0
101419062	ENERFAB	M116 Enerfab Waterwall Install Labor	7,320.0
101419063	ENERFAB	M116 Enerfab Metalizing Cleanup support	336.0
101419067	ENERFAB	M116 Enerfab WW Scaffolding Beam Install	680.0
101419072	ENERFAB	M116 Enerfab Air Heater O&M Removal of t	2,555.0
101419076	BRAND	M116 Brand Air Heater Maintenance Crew f	730.0
101419077	BRAND	M116 Brand Air Heater Scaffolding for th	1,984.0

EXHIBIT NO. 617 RECEIVED ☒ REJECTED ☐

00-CA-163503
CASE NO. 00-CA-170401 CASE NAME FirstEnergy

NO. OF PAGES 8 DATE 12/1/16 REPORTER JAO

101419078	BURNHAM	M116 Burnham Air Heater Support to provi	180.0
101419083	ENERFAB	M116 Enerfab Air Heater Basket Install u	12,854.0
101419084	ARVOS	M116 Air Heater Arvos Field Engineer	432.0
101419131	BRAND	M116 Brand Boiler Circus Tent Scaffold	720.0
101419131	BRAND	M116 Brand Boiler Circus Tent Scaffold	56.0
101419132	BRAND	M116 Brand Transformer Bulkhead, Interio	2,500.0
101419149	MPW	M116 MPW SUPPORT TO VAC OUT A/H HOPPERS	208.0
101419158	ENERFAB	ENERFAB M116 #1 FLASH TANK GRIND THE IND	200.0
101419172	TESTEX	M116 HEAT EXCHANGE SERVICES EDDY CURRENT	192.0
101419173	ENERFAB	ENER/SPRT THE INSP OF 2B HIGH PRESS HEAT	80.0
101419199	ENERFAB	M116 ENERFAB RPR INDICATIONS FOUND/30% H	300.0
101419200	BURNHAM	M116 BURNHAM REMOVE&REINSTALL INSULATION	991.0
101419202	GV HAMILTON	Remove Insulation on Main Steam Manifold	300.0
101419223	PORTERSVILLE	M116 PORTERSVILLE VALVE FOR BOILER VALVE	900.0
101419229	BURNHAM	BURNHAM M116 SUPPORT BOILER FLASH TANK I	500.0
101419230	MOBILE	Instl/Rmv Scaffold Botm F/T Exterior	33.0
101419231	BRAND	M116 Brand Instl/Rmv Scaffold HRH/HEP Pi	1,500.0
101419233	BRAND	Instl/Rmv Scaffold Main Steam Manifold	88.0
101419236	BRAND	M116 Brand Erect/Remv Scaffold Main Stea	952.0
101419237	BURNHAM	M116 Burnham Rmv/Install Insulation Main	1,292.0
101419238	MOBILE	Weld Overlay Repairs To DA Tank Shell In	600.0
101419244	MPW	M116 MPW SUPPORT VAC TRUCK FOR FD/PA FAN	64.0
101419245	ENERFAB	M116 ENERFAB VAC SUPPORT FOR A/H HOPPERS	192.0
101420159	DEEP SOUTH	UTILIZE HP TO WASH BOILER FURNACE 30 DU	30.0
101420161	AVALOTIS	M116 Avalotis to provide boiler sandblas	2,100.0
101420161	AVALOTIS	M116 Avalotis to provide boiler sandblas	5,376.0
101420162	IGC	M116 Waterwall Aperture Slope Coating	120.0
101420163	ENERFAB	DESLAG BLR, OPEN DOORS, INSTL AIR MOVERS I	320.0
101420164	ENERFAB	M116 ENERFAB REMOVE UNIT #1 F4 BURNER FO	328.0
101420167	ENERFAB	Lower Economizer O&M Repairs	160.0
101420200	ENERFAB	REPAIR BURNERS FROM INSPECTIONS THIS IS	2,400.0
101420201	ENERFAB	REMOVE&REPLACE THE F4 BURNER ASSEMBLY	600.0
101420202	GV HAMILTON	OPEN ACCESS TO F4 BURNER-RE-INSTALL WHEN	40.0
101420205	ENERFAB	WO-TRACK (BOILERMAKER FOREMAN) TIME FOR	1,040.0
101420206	ENERFAB	WO-TRACK BOILERMAKER FOREMAN TIME MOBE-D	400.0
101420207	ENERFAB	WO-TRACK ENERFAB BLR SUPERINTENDENT BLR	1,000.0
101420208	ENERFAB	WO-TRACK ENERFAB'S (LABORER FOREMEN'S) B	960.0
101420210	ENERFAB	QA/QC FOR ENERFAB - SCHEDULED OUTAGE BO	560.0
101420211	ENERFAB	REPAIR/ERODED SOOTBLOWER TUBES SOOBLOWE	300.0
101420212	ENERFAB	ENER/REPAIR NECESSARY BOILER DOOR PLUGS	340.0
101420214	ENERFAB	REPAIR ALL BURNER TE'S AS DIRECTED.	30.0
101420215	ENERFAB	ENERFAB MOBE/DEMOBE FOR ALL BOILER AREAS	880.0
101420218	ENERFAB	ECON OUTLET DUCT STRUT REPAIRS ABOVE A/H	400.0
101420219	ENERFAB	RPR THE APERTURE SLOPE AREA MEMBRANE WO	100.0
101420221	ENERFAB	REPAIR-WATERWALL TUBE TO ROOF TUBE SCAL	700.0
101420222	ENERFAB	M116 Waterwall Repairs for Coating	2,000.0
101420223	ENERFAB	RPR MEMBRANE CRACKS BLR WALLS & SLOPE M	800.0

101420224	ENERFAB	WELD OVERLAY/#1 BLR SIDEWALLS DURING OUT	600.0
101420225	ENERFAB	RPR- BOILER REAR WALL HANGER TUBES TSD	60.0
101420226	ENERFAB	ENER/SUPPORT WELD OVERLAY	2,000.0
101420228	GV HAMILTON	REMOVE LAGGING&INSULATION FOR REPLACEMENT	160.0
101420229	GV HAMILTON	M116 Burnham Waterwall Coating Support	488.0
101420230	ENERFAB	REFRACTORY REPAIRS: EROSION DAMAGE IN	20.0
101420231	ENERFAB	ENER/CLEAN THE BOILER PENTHOUSE OF ALL S	1,100.0
101420232	ENERFAB	ENERFAB MACH SOCKETS-FINISHING SPRHTR OU	800.0
101420233	ENERFAB	PROVIDE ACCESS SUPPORT-PENTHOUSE HANGER	120.0
101420234	ENERFAB	ENER/REPAIR THE PENTHOUSE SEALS	560.0
101420236	ENERFAB	ENER/RPR BROKEN STRUTS IN SECONDARY AIR	740.0
101420237	ENERFAB	ENER/RPR BROKEN PIPE HANGERS IN WINDBOX	60.0
101420238	ENERFAB	ENERFAB M116 Lower Windbox Cleaning	360.0
101420239	ENERFAB	RPR WINDBOX&SECONDARY AIR CASING CRACKS	300.0
101420241	ENERFAB	ENER/MAKE REPAIRS TO BOILER BUCKSTAY LUG	40.0
101420242	ENERFAB	ENER/REPAIR CLIPS ON DIVISION WALLS- MO	500.0
101420244	ENERFAB	REPAIR THE MIX MEMBRANE&REFRACTORY	120.0
101420245	ENERFAB	REPAIR THE MIX AREA CLIPS, LUGS, AND PLA	600.0
101420246	ENERFAB	ENER/REPAIR ANY SLAG FALL DAMAGE SLOPES/	900.0
101420247	ENERFAB	REPAIR B/A SLOPE/FURNACE SIDEWALLS	240.0
101420248	ENERFAB	REPAIR INDICATIONS-FINISHING SUPERHEATER	800.0
101420249	BRAND	BURNHAM REMOVE BLANKETS PENTHOUSE HDRS	760.0
101420250	ENERFAB	M116 ENERFAB REPAIRS/PLATEN & FINISHING	2,000.0
101420251	ENERFAB	RPR OCTOPUS TUBE/HEADER CONNECTIONS	15.0
101420252	ENERFAB	ENERFAB RPR INDICATIONS-PRIM SPRHTR OUTL	800.0
101420253	ENERFAB	RPR PRIMARY SUPERHEATER AS DIRECTED FR	900.0
101420254	GV HAMILTON	HAMILTON REMOVE/RE-INSTALL THE INSULATION	8.0
101420255	ENERFAB	RPR EROSION DAMAGE - LOWER ECONOMIZER W	150.0
101420256	ENERFAB	MAKE REPAIRS TO UPPER ECONOMIZER AS DIR	800.0
101420257	ENERFAB	REPAIR REHEAT OUTLET HEADER TUBE STUBS	600.0
101420258	ENERFAB	REPL FAILED REHEAT OUT HDR THERMOCOUPLES	240.0
101420259	ENERFAB	ENER/REFRACTORY REPAIR WORK/REHEAT OUTLE	100.0
101420260	ENERFAB	RPR EROSION DAMAGE RHTR VERT&HORIZ SECTI	1,600.0
101420262	ENERFAB	REPAIR THE SCREEN TUBES WHICH PASS THROU	1,000.0
101420264	ENERFAB	Repair Econ Bypass Dampers	240.0
101420265	GV HAMILTON	Remove 5" Seal Penthouse Lagging & Insul	64.0
101420267	BRAND	Brand Provide Boiler Maint Scaffold Crew	900.0
101420282	ENERFAB	M116 Enerf Make Repairs to Platen Header	800.0
101420283	ENERFAB	Enerfab Washdown Boiler Scaffolding After	468.0
101420292	BURNHAM	Burnham to provide insulation support fo	1,440.0
101420293	GV HAMILTON	REMOVE TOP 2' DIVISION WALL INLET BOXES	48.0
101420294	BRAND	Instl/Rmv Scaffold HRHT Outlet Hdr	320.0
101420295	BRAND	BRAND SCAFFOLD E&W PSH INLET OCTOPUS	21.0
101420296	BRAND	Brand Install scaffold Lwr WBX 1-2 Downc	40.0
101420297	BRAND	Brand Misc Dutchment Scaffolding,	192.0
101420298	BRAND	Instl/Rmv Scaffold HRA To Roof Seals	120.0
101420299	BRAND	Brand Instl/Rmv Scaffold PriShtr Inlet B	176.0

101420301	BRAND	Brand Instl/Rmv Scaffold Penthouse Heade	376.0
101420334	ENERFAB	M116 Enerfab Aperture Slope Tube Repairs	1,700.0
101420444	ENERFAB	ENERFAB REPLACE 1A HP HTR BYPASS VLV	100.0
101420619	AVALOTIS	M116 Avalotis Penthouse Header Sandblast	432.0
101420621	ENERFAB	M116 Enerfab Laborers Penthouse Cleaning	1,000.0
101420626	ENERFAB	M116 Enerfab Penthouse Mobe and Demobe	240.0
101420629	TESTEX	M116 HEATER EXCHANGE SERVICES EDDY CURRE	192.0
101420630	PORTERSVILLE	PORTERSVILLE RPR HP HTR DEWRANCE VLVS	85.0
101420631	BRAND	BRAND SCAFFOLD FOR DA TNK & HP HTR SFTYS	140.0
101420632	BRAND	M116 Brand Lower Windbox Scaffolding	320.0
101420634	ENERFAB	M116 Enerfab General Boiler Support Crew	1,016.0
101420635	BRAND	M116 Brand Internal Boiler Rentals consi	1,440.0
101420666	BRAND	M116 Brand Exterior Windbox Scaffolding	216.0
101420883	BRAND	1A BFPT scaffold suipport M116	160.0
101422322	BRAND	M116 Brand Waterwall Maintenance Crew	480.0
101423606	AVALOTIS	M116 SANDBLAST FLASH TANK	72.0
101423607	BURNHAM	M116 RMV/INST B/A SEAL TROUGH INSUL	320.0
101423608	BRAND	M116 BRAND SCAFFOLD FOR EXTRACTION VALVE	200.0
101423652	ENERFAB	ENERFAB M116 REPAIRS TO BURNERS	1,612.0
101423670	PORTERSVILLE	M116 PORTERSVILLE VLV RPR 3A HP HTR SFTY	28.0
101439685	ENERFAB	Repair SBS baffles/supports	20.0
101439809	ENERFAB	WO-TRACK ENERFAB'S (LABORER'S) INDIRECT	3,000.0
101439824	ICE	SETUP U1 CONSTRUCTION ELEVATOR	80.0
101439824	ICE	SETUP U1 CONSTRUCTION ELEVATOR	168.0
101439825	ENERFAB	OPERATE U1 CONSTRUCTION ELEVATOR	1,200.0
101439842	GV HAMILTON	REMOVE DEBRIS CIRC WTR INLET&WTR BOXES	6.0
101439843	ENERFAB	ENER: MISC. REPAIRS TO COND HOTWELL TTL	180.0
101439845	GV HAMILTON	G.V. Hamilton Mobilization and De-Mobiliz	200.0
101439846	GV HAMILTON	M116 GV Hamilton R&R Tower Nozzles, Clam	500.0
101439847	GV HAMILTON	G.V. Hamilton labor cost to replace drif	400.0
101439849	GV HAMILTON	G.V. Hamilton Supervision Cost and Overh	300.0
101439851	GV HAMILTON	M116 Hamilton Clean Tower walkways, basi	600.0
101439860	MPW	Provide HP Water To Flush Condenser Wate	8.0
101440052	ENERFAB	R&R BOILER DRAIN/VENT VALVES F	400.0
101440053	ENERFAB	AFTER A/H WASH, CLEAN OUT FD DUCTS AND	160.0
101442121	GE	Remove fine mesh screens/install coarse	160.0
101442129	GE	Remove fine mesh screens/install coarse	160.0
101443673	BRAND	M116 Brand Boiler Shanties	272.0
101447744	BRAND	M116 Brand Bottom Ash Scaffolding	190.0
101447745	BRAND	M116 Brand Bottom Ash Maintenance Crew	2,620.0
101449314	IGC	M116 Air Placement Bottom Ash Refractory	288.0
101449320	AVALOTIS	M116 Boiler Coating Removal	168.0
100731552	ENERFAB	Enerfab Remove U1A/H Plenum Exp Jt	150.0
101230114	ENERFAB	Hole in 1B IDF/ABS xover duct @ roof	320.0
101439614	ENERFAB	PROVIDE LABOR-REPAIR "C" TRAIN DUCTS 1	1,000.0
101439615	ENERFAB	PROVIDE LABOR-REPAIR "D" TRAIN DUCTS 1	1,000.0
101439616	ENERFAB	PROVIDE LABOR-REPAIR "E" TRAIN DUCTS 1	1,000.0

101439617	ENERFAB	PROVIDE LABOR-REPAIR "F" TRAIN DUCTS 1	1,000.0
101439635	AVALOTIS	"B" TRAIN DUCT WORK: MAKE COATING RPRS	360.0
101439646	MPW	VAC OUT & HPW CLEAN LIME RECYCLE TANK	8.0
101439646	ENERFAB	VAC OUT & HPW CLEAN LIME RECYCLE TANK	16.0
101439649	AVALOTIS	Provide Support For 1A Flue Cleaning: Th	600.0
101439650	AVALOTIS	Provide Support For 1B Flue Cleaning: Th	600.0
101439651	BRAND	INSTALL SCAFFOLD "A" CHIMNEY INLET HORIZ	200.0
101439652	BRAND	INSTALL SCAFFOLD "B" CHIMNEY INLET HORIZ	200.0
101439653	BRAND	"A" Train Normal Scheduled Outage Scaffd	360.0
101439654	BRAND	"B" Train Normal Scheduled Outage Scaffd	360.0
101439655	BRAND	"C" Train Normal Scheduled Outage Scaffd	360.0
101439656	BRAND	"D" Train Normal Scheduled Outage Scaffd	360.0
101439657	BRAND	"E" Train Normal Scheduled Outage Scaffd	360.0
101439658	BRAND	"F" Train Normal Scheduled Outage Scaffd	360.0
101439665	MPW	VACUUM OUT A/H MANIFOLD BOX/METAL RPRS	60.0
101439666	ENERFAB	PROVIDE LABOR/RPR A/H OUTLET PLENUM 1 X	300.0
101439667	ENERFAB	CLEAN "A&B" REHEAT CHAMBERS & A&B HORIZ	500.0
101439668	ENERFAB	METAL RPRS "A&B" REHEAT CHAMBERS & HORIZ	200.0
101439669	AVALOTIS	COATING REPAIRS "B" REHEATER CHAMBER IN	330.0
101439670	AVALOTIS	COATING RPRS "A&B" REHEATER CH	330.0
101439671	ENERFAB	/METAL RPRS TO "A" HORIZONTAL DUCT B	100.0
101439672	AVALOTIS	"A" HORIZONTAL DUCT WORK INCLUDES SANDB	150.0
101439673	ENERFAB	METAL RPRS "B" HORIZONTAL DUCT BETW	100.0
101439674	AVALOTIS	"B" HORIZONTAL DUCT WORK INCLUDES SANDB	150.0
101439678	ENERFAB	Repair Ammonia Injection Grid	20.0
101439679	ENERFAB	Repair SCR Bypass Dampers	40.0
101439682	ENERFAB	Repair SCR Inlet & Outlet Dampers	80.0
101443623	BURNHAM	Burnham M116 Thick Dist Box CIP	120.0
101440024	MPW	EXT BOILER WASHDOWN DURING SCHD OUTAGE	340.0
101419161	PORTERSVILLE	MAINT. UNIT#1 - TEAR DOWN INSP EV VLV A	2.0
101419162	PORTERSVILLE	MAINT-UNIT#1 TEAR DOWN INSP "WV" VLV	2.0
101419224	ENERFAB	M116 FDFAN_1A_MAJOR_INSP	180.0
101419224	BRAND	M116 FDFAN_1A_MAJOR_INSP	21.0
101419224	AVALOTIS	M116 FDFAN_1A_MAJOR_INSP	50.0
101419225	ENERFAB	M116 FD FAN_1B_MAJOR_INSP	180.0
101419225	AVALOTIS	M116 FD FAN_1B_MAJOR_INSP	50.0
101419225	BRAND	M116 FD FAN_1B_MAJOR_INSP	21.0
101419226	ENERFAB	M116 PAFAN_1A_MAJOR_INSP	67.0
101419226	AVALOTIS	M116 PAFAN_1A_MAJOR_INSP	33.0
101419227	ENERFAB	M116 PAFAN_1B_MAJOR_INSP	67.0
101419227	AVALOTIS	M116 PAFAN_1B_MAJOR_INSP	33.0
101419228	ENERFAB	M116 PAFAN_1C_MAJOR_INSP	67.0
101419228	AVALOTIS	M116 PAFAN_1C_MAJOR_INSP	33.0
101440025	PORTERSVILLE	UNIT#1 - INSPECT "A" VALVE Act Desc: P	2.0
101440026	PORTERSVILLE	UNIT#1 - INSPECT "B" VALVE Act Desc: P	2.0
101440027	PORTERSVILLE	UNIT#1 - INSPECT "C" VALVE Act Desc: D	2.0
101440028	PORTERSVILLE	UNIT#1 - INSPECT "D" VALVE Act Desc: D	2.0

101440029	PORTERSVILLE	MAINT. UNIT#1 - INSPECT N VLV	2.0
101440031	PORTERSVILLE	MAINT. UNIT#1 INSPECT P VALVE Act Desc:	2.0
101440032	PORTERSVILLE	MAINT. UNIT#1 - INSPECT&REPAIR "EW" VLV	2.0
101440033	PORTERSVILLE	MAINT. UNIT#1 INSPECT "EY" VALVE Act.De	2.0
101440035	PORTERSVILLE	MAINT. UNIT#1 - INSPECT&REPAIR "WW" VLV	2.0
101440038	PORTERSVILLE	UNIT#1 INSPECT&LUBE "P" BLOCK VLV OPERAT	2.0
101440039	PORTERSVILLE	UNIT#1 - TEAR DOWN INSPECTION "P" BLOCK	2.0
101313990	YATES	Cond/wire for new Warm Water by-pass vlv	40.0
101439990	SUBSTATION	CLEAN GSU INSULATORS AND BUSHINGS BEFOR	16.0
101440011	ENERFAB	#1 ELEVATOR REPAIRS DURING OUTAGES TTL:	80.0
101440012	BRAND	INST/REM SCAFFOLD STATION PWR XFORMER	240.0
101440014	BRAND	SCAFFOLD FOR GEN ISO PHASE BUS INSPECT	48.0
101440969	SUBSTATION	PERFORM DOBLE TESTING OF ALL (6)-AUX STA	72.0
101439988	SUBSTATION	PERF CLR.CLEANING OF #1 GSU DURING OUTAG	48.0
101440013	BRAND	Instl/R!mv Scaffold Attempt Sprays	48.0
101440065	BRAND	Scaffold for Extraction Check Vlv Insp.	10.0
101439659	MOBILE	IDFAN_1A_MAJOR_INSP	180.0
101439659	MPW	CLEAN IDFAN_1A,B,C,D,E, & F MAJOR_INSP	360.0
101439660	MOBILE	IDFAN_1B_MAJOR_INSP	180.0
101439661	MOBILE	IDFAN_1C_MAJOR_INSP	180.0
101439662	MOBILE	IDFAN_1D_MAJOR_INSP	180.0
101439663	MOBILE	IDFAN_1E_MAJOR_INSP	180.0
101439664	MOBILE	IDFAN_1F_MAJOR_INSP	180.0
101439776	MPW	Hp Clean All 6 Scrubber Ring Header, Flo	360.0
100538617	PORTERSVILLE	Inspect and repair the HSFV M116	64.0
100600422	PORTERSVILLE	Inspect 1B BFP Discharge Valve (def	120.0
100687040	PORTERSVILLE	U1 116 BFPT Aux Steam Supply Vlv leaks b	144.0
100692786	PORTERSVILLE	VLV BONNETT LEAK AND VLV HAS NO OPERATOR	240.0
100704822	PORTERSVILLE	Aux steam safety valves leak through	120.0
100704822	PORTERSVILLE	Aux steam safety valves leak through	120.0
100704822	PORTERSVILLE	Aux steam safety valves leak through	4.0
100710369	PORTERSVILLE	Recondition BFP Recirc Iso Valves 7,8,10	4.0
100710369	PORTERSVILLE	Recondition BFP Recirc Iso Valves 7,8,10	4.0
100802690	PORTERSVILLE	Inspect 1A HSW Pmp Discharge MOV M116	504.0
101152484	GE	Inspect Lube Oil Booster Pump	80.0
101152632	GE	Main Turbine Overhaul M116	18,000.0
101383347	GE	Inspect MOP and SR Bearing M116	48.0
101439977	GE	UNIT#1 GEN AIR TEST	24.0
101440981	SUBSTATION	PERFORM DOBLE TESTING OF #1 GSU	144.0
101444012	BURNHAM	Burnham M116 SCR CIP Burnham	320.0
101447257	BURNHAM	U1 MATS-NH3 Recovery Burnham Provide sup	160.0
101447258	BURNHAM	U1 MATS-Controls-Burnham	300.0
101444011	BRAND	M116 BRAND SCAFFOLD U1 SCR CIP Brand	776.0
101447256	BRAND	U1 MATS-NH3 Recovery Brand	59.0
101450586	BRAND	M116 1A,B TRN Reline CIP Brand Spread OH	450.0
101444005	ENERFAB	M116 SCR CIP Enerfab NON-TARGETED instal	6,071.5
101444022	ENERFAB	M116 SCR COR Enerfab O&M removal labor f	7,280.0

101445789	ENERFAB	M116 SCR CIP Enerfab TARGETED install la	18,214.0
101447253	ENERFAB	U1 MATS-NH3 Recovery Enerfab	240.0
101444017	MPW	M116 SCR CIP MPW to provide vac services	1,428.0
101444016	SIMMERS	M116 SCR CIP Simmers	168.0
101444013	YATES	M116 SCR CIP Yates	222.0
101447259	YATES	U1 MATS-Controls-Yates	230.0
101447260	YATES	U2 MATS-Controls-Yates	250.0

7/7/18

**FirstEnergy - Bruce Mansfield IBEW 272 Negotiations
Company Proposals Summary (as of July 7, 2015)**

- Term - 3 year agreement that would expire 2/15/17
- GWI - Current proposal provides:
 - 1.5% at ratification, 1.0% one year after ratification and 1.0% two years after ratification
 - FE offered the following 12/8/14 (timing same as above)
 - Retiree Medical Box ends 12/31/14 (3.0%, 2.5% and 2.5%)
 - Retiree Medical Box ends 12/31/15 (2.5%, 2.0% and 2.0%)
- Equity Adjustment – \$.75 per hour for all classifications at ratification
- Benefits
 - End Retiree Medical Box – 12/31/14 or 12/31/15 (see above)
 - Cash Balance Pension Plan for new hires (Now after 1/1/16)
 - Update Medical plans in agreement to reflect current FE medical plans
 - \$500/\$1,000 contribution to HSA or 401K for active employees year after end of retiree medical (now 2016)
- Operational objectives
 - Eliminate work location restrictions
 - Restore ability for in house Dr. examinations & requirements for Drs. slips
 - Elimination of vacation banking
- Safety Manual updated by adding Amendment 1

Note: This is only a bullet point summary of the primary Company proposals, the specific language contained in Company proposals governs. It is intended to be an outline for discussion purposes only

EXHIBIT NO. _____ RECEIVED _____

CASE NO. _____ CASE NAME _____

DATE RECEIVED _____ FILED TO _____

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GCX- _____

EXHIBIT NO. GL8 RECEIVED ☒ REJECTED ☐

CASE NO. 04-CA-163303 CA-170901 CASE NAME FirstEnergy

NO. OF PAGES 1 DATE 10/1/14 REPORTER JAO

Appendix000568

**FirstEnergy and IBEW Local 272.
Contract Discussions 8/20/15 8AM (Perkins Austintown)**

Present:

Chuck Cookson – FirstEnergy (CC)
Herman Marshman – IBEW Local 272 (HM)

Mr. Cookson (CC) opened the meeting by stating that it was a follow up to our meeting on July 21.

(CC) we ended the last meeting with clear disagreements on the following issues:

1. End of retiree medical (the box) – the company had proposed 10/31/15 and the union would not accept unless coverage went to 2017
2. Cash Balance Pension – union stated could not do
3. HSA/401K contributions – union is looking for contributions to retirees and we responded that we could only do for active employees

(CC) started that we could move on the term of agreement and still had room in the wage area

Mr. Marshman (HM) the benefit (retiree health care) has a monetary value. The company should provide the savings from the termination of this benefit to the retirees. Looking for a subsidy for the retirees. This benefit has been negotiated in every contract and has been provided by the Company. It is only fair to compensate the retirees if the Company wants to end this benefit. There is money there.

(HM) You mentioned the ACA. If a husband and wife collect a pension and SS over \$4600, their subsidy is about \$100 per month.

(CC) Our info shows that if a couple makes less than \$62,000 they end up paying less than when they are on FE health care (with our current subsidy).

(HM) At \$56,000 a subsidized plan will cost \$470 per month. Our real issue is sharing the cost savings with the retirees.

(CC) Whatever savings were generated were put back into operating the business to sustain operations (\$180 MM in dewatering facility).

(HM) If the Company does better in the future and I give away now, I can't get back. There are upcoming decisions that may be favorable like the PPA – that's big if that happens. Taking this away is unethical. Everyone must get something.

(CC) Our position is that it (the box) will end and go away. We are proposing to give \$\$ to the active employees. We have a fundamental disagreement. We are eliminating this across the board.

(HM) Not trying to be unreasonable, this is not favorable for us. If I could get something, we could move on.

(CC) In this area I cannot do any more than I have already offered.

(HM) How do we get around this?

(CC) We have offered other things – like an initial 8.5% wage increase.

EXHIBIT

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(HM) I need to get to a place – we are a distance apart. I need to achieve something in this area. There is no motivation for me to move on anything if still at this point. I would have accepted no changes in the current agreement. There are too many uncertainties. If you close the plant, then what?

(CC) We have clear direction from our new CEO (Chuck Jones). The Big 7 – FE is focused on running generation and must generate cash in the process. That is what we have asked for - maintenance flexibility and expanded resource sharing to allow the plant to operate differently.

(HM) I just want a portion we should share.

(CC) We are sharing what we can.

(HM) True story – about 2 weeks ago a maintenance crew was assigned a job. The guys found mobile maintenance people performing the work. The guys filed a grievance, upset with the foreman. What upset them the most was not only mobile doing their work, but they were being paid more to do it. You can eliminate that by paying Mansfield what mobile is paid.

(HM) Still 15% behind Sammis overall.

(CC) More likely about 12%, I need to show you the differences.

(HM) Can't have mobile making more than our guys. If you are paying them the same, you will have no complaints. They will have a problem if they are paid less.

(CC) Difference?

(HM) \$35 for Mechanics and \$40 for leads. Our guys are \$32. You need to pay a comparable wage. Once we have done what is needed to fix the facilities, will you return what is taken away?

(CC) Would be a good option to have, but we need to get there first. Will take at least 2 – 3 years to fix the balance sheet. Over that time need to pay down debt, generate cash and reduce costs. I don't see our situation changing quickly, will take time and hard work.

(HM) over the next 2-3 years you will have everyone from the 1980's retire. There is a 20 year gap until the next large group of potential retirees. Would you have an issue with transitioning out these 1980's people for 3 to 4 years – give them a subsidy until they are 65?

(CC) I can't do that- have given you my best offer in this area.

(HM) Why not? That is really the best I can do. People know it is going away. These are the people who will ratify an agreement. Flip side is you piss them off by making them continue to work.

(CC) I can't offer that.

(HM) Is something they can accept.

(CC) Fact people work longer is OK.

EXHIBIT NO. 669 RECEIVED ☒ REJECTED ☐

CASE NO. 66-CA-1163203 CASE NAME FirstEnergy

NO. OF PAGES 6 DATE 8/1/16 REPORTER JAO

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(HM) Not OK. This is a physical job, they work under extreme conditions. Last year alone 6 to 7 guys went out for health reasons, only going to get worse. It is in Company's interest to give them a reason to leave. You can change the mindset if you were to cooperate.

(HM) You are basically saying we are going back to the table. We will leave nothing out, everything is at stake for us, battle to the end. I gave you an option, provide for the guys hired in the 80's, and only consider a portion of the current subsidy. Right there for you to accept. Absolute best I can do.

(CC) Can't accept it, have given you everything that I have with respect to Retiree health care – there is no more.

(HM) It is less than local 29.

(CC) They never had post 65.

(HM) They never paid Medicare portion.

(CC) You are already better than 14-15 other FE locals. They ended at end of 2014. This is the best I can do.

(HM) Formulate committee back again

(CC) Last issue – information. You had asked where about our staffing targets. Current target is 228, bargaining unit is currently at 235 (clarified that this included 2 9/1 retirees)

(CC) Will send you date to get together with full table committees.

**FirstEnergy and IBEW Local 272.
Contract Discussions 7/21/15 8AM (Perkins Austintown)**

Present:

Chuck Cookson – FirstEnergy (CC)
Herman Marshman – IBEW Local 272 (HM)

Mr. Cookson (CC) provided proposals that revised certain portions of the previous comprehensive proposal given to the union in September 2014. The remaining provisions of the comprehensive proposal that are not amended are in place still as active proposals.

Mr. Marshman (HM): reviewed the proposals and made the following initial comments:

- The company can't just take resource sharing and put in in the contract book, it requires further discussion
- If the staffing level is going to decline I need a means to generate revenue for my local
- I am not going to say the company is intentionally reducing headcount, but since 2008 we have lost about 130 employees

(CC) reduced headcount through attrition going forward would give the plant a chance to survive.

(HM) this cannot come at the expense of the union, we would need some type of agency fee arrangement and/or contingency plan for contractors who come on our property. A lot of that can be negotiated between the company and contractors. From my position I can't knowingly and willingly allow the company to impact headcount long term like you are proposing. I can't let you impact my ability to represent my members we need to maintain the union as a whole.

(CC) Headcount could be 40-50 less than today in the bargaining unit, primarily in mechanical and electrical.

(HM) Right now there are between 245 to 250 bargaining unit employees at Bruce Mansfield with 70-80 anticipated to be leaving soon via retirement. How many people are in the bargaining unit in Harrison?

(CC) about 150 to 160.

(HM) Is your plan to get to 150?

(CC) No it would be more likely to 200 or so total bargaining unit.

(HM) There are already too few people in the bargaining unit with no end in sight.

(HM) Why did the Company propose a \$1.00 equity adjustment versus a % increase for equity?

(CC) It was because we started initially proposing equity adjustments at cents per hour. Note: the equity along with the 5.5% GWI this would result in an immediate 8.5% (approximate) increase for everyone at ratification.

(HM) Regarding the term of the agreement, we are currently in July 2015 and the Union would need a true 3 years, I was initially looking for a 4-5 year agreement.

(CC) Please note that this proposal the company was not proposing a retroactive pay increase. Increases would be effective either at ratification or one year after ratification.

(HM) made the following comments regarding the Company proposals:

- Retiree Medical – 2017 is the minimum I will accept
- No interest in the Cash Balance plan
- HSA/401K – you need to provide a means to compensate the retirees. You have proposed compensating the current and future retirees, there are guys will be leaving soon and when they go, your contribution will end
- I can't tell you that you can't terminate healthcare, all I can do is to try to negotiate subsidies for health care (that is my intent)
- Resource Sharing – if agreed to the language needs to look more like the language in the transmission and distribution contracts, not generation. You need to provide more \$\$'s. Some of the plans provide more money to employees

(CC) Conus tables provided in most recent contracts.

(HM) Until you address some of items that conflict with our current contract, it will be hard to address.

(CC) What items are conflicting? We have no issues elsewhere.

(HM) Seniority and qualifications (Article 6). We have no means to determine qualifications for those that come in.

(CC) Resource Sharing only covers how people are assigned out of the plant, not how people come into the plant as these issues are covered by your CBA.

(HM) What is the change for the severance plan?

(CC) Just a clarification that resource sharing assignments do not trigger a severance payment. If there is a temporary layoff or a resource sharing assignment, it would not trigger a severance payment.

(HM) What if an employee did not want to accept under these provisions?

(CC) The employee would be considered as resigned.

(HM) Why these proposals so late?

(CC) We have a new CEO, a change in our overall business strategy and changing business conditions. We are looking to staff the plant in a manner that will allow it to compete in the marketplace. The changes that we have identified allow us to flex the workforce much more than we can today.

(HM) What about the future? We can't maintain a 2 week run today. We did not make the decisions that got us here. This should not come at the expense of the workforce. There has been loss of revenue over the years, but I do not accept the fact that the Company has no money. You can still make payroll. FE has extensive credit lines, still very top heavy in management. Even the dividend cut did not capture additional revenue that it was intended to capture. I still can't sell my guys out short. If I can't get a

compromise on how to keep the union going, it will be difficult. I need a guarantee, some sort of agency fee to collect revenue from them.

(CC) Is that the only thing in our way?

(HM) Retiree Health care must go to 2017. Also need a 12% equity and 3% at ratification (total 15%). Employees feel they need to be recognized. The Company has benefited from all of the lost wages. I am close to going back to the table, I do not want to do that, would like to do that here.

(HM) I have been given full authority to negotiate, trying to reach some kind of common ground. Can agree to some things, but most things still have issues with. I think that there is a legal issue if the Company continues to propose the cash balance pension plan. I am not negotiating changes for new employees. I have enough on my hands with the retiree health care. There is nothing that you can offer to change the situation of the cash balance plan. This single issue alone, no interest whatsoever.

(HM) I want to review the proposals, let's schedule one more meeting and see where we go. The week of the 10th is not good.

Agreement on August 20th at Perkins at 8AM.

FirstEnergy and IBEW Local 272

Contract Discussions 9/18/15 – 9 AM (Beaver Falls Radisson)

Present:

FirstEnergy

Chuck Cookson – Executive Director, Labor Relations FirstEnergy (CC)

Jim Graf – Plant Director (JG)

William Drain – Manager Plant Maintenance (WD)

Tony Gianatasio – Lead Negotiator (TG)

IBEW Local 272

Herman Marshman – IBEW Local 272 (HM)

Mike Welsh – IBEW International Rep (MW)

Roger Stickler

Kevin Wiley – VP IBEW 272 (KW)

Mike McShane

Dennis Bloom

Frank Snyder

9:04 AM (Prior to bargaining session)

(HM) knocked on the door to the management caucus room. Said he needed to speak w Jim Graf and or Chuck or Tony. TG came out with JG. On September 6 we filed a 1st step grievance meeting – looking for the results for the storeroom for Jeff Higgins.

(JG) you mean the SASS Test results?

(HM) yes. We cannot meet today until I get that.

(TG) What does the results have to do with bargaining?

(HM) I need it, it's important, very important.

9:35 AM Follow up discussion with HM, MW, CC and JG .

(CC) What he was looking for.

(HM) I want the test scores for Mr. Higgins. He said he had asked for them before and he had not rec'd an answer.

(CC) I understand the union has filed a grievance, and that this morning was the first that he (CC) had personally had heard about the request. Providing test results is a complex issue and something that I don't think that FE has ever done. EEI owns the test, and they also govern the scores, but I am not sure. I would be happy to check into this. I believe it is confidential but I need to check with our compliance group, legal counsel and EEI, but that cannot all be done

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today. I would be happy to get you an answer but I can't do all of that today. We are here to bargain over 272's contract and that is what we are ready to do. (HM) to CC - you'd better have the information to me in within 30 minutes.

10:30 AM

(CC) to HM - you knew about this since the 6th and you just notified me of this today. We have to get compliance involved, legal and EEI. Step one answer to the grievance is due today. Are you refusing to bargain?

(HM) No, we will meet

10:48 AM Main table negotiations started

(HM) You guys know how to start a day off. Before we start here there are some issues the guys want to address prior to about plant issues, which means before, in case there is any misinterpretation.

(RS) Have you gotten any response about paying the guy?

(BD) Yes

(RS) What about the trash removal?

(JG) That will be assigned to someone permanently.

(RS) We had talked to Phil Zablocky the other day, would still like to see the Plant Helper filled.

(JG) I will defer that to Phil.

(JG) I think we are going down two different roads on that.

(FS) Lighting issues?

(JG) George said he finished the lighting today. New lights above the scaffold storage area look great and thank you.

(JG) We will hit that stairwell next.

(FS) when are out there, you need the lighting.

(JG) As long as we are putting up lights and moving forward, I appreciate your input.

(FS) Any time

(MM) We have an issue, they are changing job specs and moving control rooms, they tried to talk about it. There was a formal request to negotiate it.

(JG) We are currently in the investigation stage about moving the control room. More likely than not that will be the direction that we will go. Give me time to find out more about that and I will answer that more accurately.

(HM) Bunker run down on unit 3. They did the 2 minute drill and found an issue.

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EXHIBIT NO. GC10 RECEIVED ✓ REJECTED
CASE NO. 16-CA-163303 CASE NAME First Energy
NO. OF PAGES 12 DATE 12/1/14 REPORTER JAO

(BD) They will put a blanket of water down.

(JG) We heard some concerns about that. Our yard group had a great questioning attitude. We have a safety plan in place and are prepared to start that on Monday morning.

(RS) I assume you are still monitoring the air in the unit 3 control room?

(JG) To the best of my knowledge we are.

(RS) Need to give the guys some time to come out and get some fresh air.

(JG) I am pretty happy with the yard crew that they put in the effort to do it right, but it will be a little later than what we wanted. We will go around the clock to make it right. Plan is to move from 3 to 1 then to 2 and then once per qtr. we will run down every bunker.

(FS) What are they doing about stopping the rope and the debris in classifier? There is stuff they are finding in the classifiers.

(JG) We have contacted our vendors. The fact that we do not crush our own coal is our weakness and that is the same for most stations. Right now we are just pressuring our vendors. What would you recommend? Whatever we take off those barges we are sending that right to the mills.

(FS) You have to put some type of screening process.

(RS) When I worked in the coal yard we did have crushers. I was under the impression we had by pass chutes to go around the crushers. I have spent numerous hours working on those crushers.

(JG) We used to take those outside and work on those crushers. The concrete and rock, crushers take care of most of that stuff, we are pressuring our vendors to send us a cleaner product.

(FS) It wasn't part of the concrete we are producing.

(DB) The refined coal systemwhich we feel are helping.

Pug mill for blending the coal with the material.

(General discussion about the coal blending)

(KW)) Can you get me a truck for midnights? We don't have keys.

(BD) We can look into that.

(FS) Will there be new fork trucks for the boiler?

(BD) We are looking into that.

(DB) There was a maintenance vehicle up at the plant that was inspected and the inspections were out on a couple of trucks.

(BD) I will check and see if any of them are overdue now.

(HM) Anything else (to his committee)?

(RS) The plant OT list.

(HM) There is additional language that needs to be changed, As soon as we make the changes we will get it to the company.

(HM) In your comprehensive offer, under maintenance flexibility. I noticed there was a change from what you gave in sidebar in August?

(CC) Yes resource sharing was added in addition to mobile maintenance, which I mentioned yesterday.

(HM) You had a mechanic B in a previous proposal.

(CC) We would like to do that, but I think we have the right to do that under the terms of the current agreement – we can just create a new job through the normal course. We plan to create the job and sit down and talk about the wage rate and follow the terms of the collective bargaining agreement. We will withdraw this proposal.

(HM) So the company choose to address this at a later date?

(CC) Yes.

(HM) In sidebar meetings the union had objected to any additional proposals from their original proposals.

(CC) Not sure what you mean by that.

(HM) In the company interests, the wording was that the company could add any additional proposals being added to the proposals?

(CC) That is correct, I will note your objection.

(HM) We objected earlier, that the union or the company would not be able to add the proposals.

(CC) I understand your objection but I don't agree with that.

(HM) Initially, during the term of these negotiations, give me one second please. As early as April 10, 2014 the union made a formal request in regards to contracting out. That was in preparation to negotiate article IV of the CBA. Also, on May the 21st, 2014 the union made a request to meet regarding contracting out prior to work being done. We sent you a letter on July 16, 2014 and the company responded on July 25 2014 alleging that the union unilaterally decided to cease attending the contracting out meetings, and that there have been no response and no one for the union has appeared at any of said meetings. Also within said meeting, a meeting was scheduled to address contracting out issue. In the same year, Sept 11, 2014, a letter was sent out to the company to negotiate all maintenance group and all maintenance work that is to be contracted out during the upcoming unit 3 outage. On March 11, 2015 the union provided an updated list of contacts for notification of work to be contracted out. On April 14, 2015 the union responded to a letter from the company dated April 13, 2015 stating that we are not refusing to negotiate because we are cancelling our contracting out negotiating meetings for April 21 and 27th of April. At that particular time there were disputed issues in regard to information that had

not been provided to the union and a decision had come down with the anniversary service awards that the company had filed an appeal. On Sept 16 2015, in response to an article VIII meeting section 4 on August 5, the union stated the company was not meeting its obligation to meet prior to providing work to contractors. Again the company's argument was the union's refusal to participate in some of the meetings. The company went on and stated the use of contractors has been in compliance with the contract and no contract violation has occurred. At this time is the Company ready to negotiate Article IV?

(CC) What's your proposal? If you want to make a proposal on article IV we'd be happy to listen to it.

(HM) Is that a yes?

(CC) Have not seen any proposal from the union. If you give us a proposal, we will consider it.

Union Caucus 11:35 AM

12:05 PM – Co going to lunch

1:05 PM Return to the table

(BD) To clarify, we will pay Herman and Snyder for today.

(HM) what union proposals does the Company (for the record)?

(CC) please give us a few minutes and we will come back and respond.

Caucus 1:20 PM

Returned 1:25 PM

CC we have the following union proposals:

1. Union proposal on Article XVIII – Benefits. WE made a counter proposal to you on that.
2. Amend Article 4 - all it says is amend article IV, amend section b, amend section d. The union has not provided any other specifics
3. Article 16 – The Company has made counters regarding both the ability to amend and specific changes.
4. We have two proposals on language interpretation and we have met and discussed the entire list of issues.
5. You have proposed to negotiate health & safety. We spent 9 full days and parts of others discussing the safety manual, changes etc. We have asked you and your local, on numerous occasions, to participate in the plant safety process to resolve specific plant safety issues.
6. Last one – we have a unilateral changes proposal and we met last January. As we stated then, we believe that we are following the contract

(HM) By your definition we're done.

(CC) We have responded to, responded that we are not interested or made counter proposals to all of your proposals. There is nothing that we haven't responded to.

(HM) To clarify, the five proposals that you referenced, the company's position is that we have exhausted our negotiations on those subjects.

(CC) I've said that we responded.

(HM) Union presented a new proposal regarding Article IV (Management Responsibilities).

(HM) leaves the room 1:34 PM

(CC) Is Herman coming back, because I just wanted to ask if you could explain this (points to proposal) to us. I think I know what you're asking for but I don't want to assume anything.

HM returns

(CC) Herman can you just describe what you're looking for?

(HM) Just give me two seconds here. As you can see in bold print we have inserted language to protect the work that is normally done by our bargaining unit employees and to restrict the company from utilizing contractors because it is part of our business, as has been discussed in numerous meetings. We would like to maintain all work that is normally and customarily done by us.

In subsection D, is highlighted the third sentence in the paragraph two of subsection d where it starts with and. The Company normally argues that employees are receiving forty hours per week. Overtime within the department which the work is to be performed only protects the hours of work outside the scheduled 40 hours that can be performed by the bargaining unit in regards to overtime. Right underneath is highlighted work that needs to start immediately. The sentence reads except in emergencies. Now that allows the company to contract work that is defined as emergencies and generally for purposes of this agreement work that needs to be done, within a specific time period. Which as stated here, immediately meaning within the course of a day. We lose a unit and the company needs to bring in an outside contractor to perform the work that needs to be done. We are not holding the company to holding the meeting prior to with the work that starts immediately and we like to define immediately as within a 24 hour period. The last sentence of this paragraph and it is also in bold print - all scheduled emergencies will be done in accordance with Appendix F. The interpretation of that language is when the company defined an emergency and they determine to take a D rate in which the work will be performed at a later date will be considered a scheduled emergency.

(CC) Not sure I understand all that you have said.

(HM) Lets say we have a tube leak and we find out we have a leak but we continue to run the unit until the weekend, that will be considered a scheduled emergency and the work to be performed will be in accordance with appendix F. Sub paragraph one of appendix F describes work to be performed in that department. Basically the company would use the call board. We want OT protect the overtime

(CC) You are saying we would have to work overtime before bringing in contractors?

(HM) That means we are taking a scheduled emergency and the work would have to be performed within that department and we perform work within I and T or electrical and we are saying that the Overtime provision will be utilized. Not that you have to use overtime, that is determined by the company. But, before you use contractors, you would have to use overtime. We are looking at the associated hours and the overtime for the department. We would ask the company to abide by appendix F and utilize the call board within that department.

(CC) Jim, Bill any questions?

(BD) You first highlighted overtime within the department to be performed. What is the specific ask?

(HM) Prior to bringing in any contractors to perform the work and it is basically any work normally done by us, we are requesting the company use the call board and assign the work using overtime.

(CC) Before we can use contractors we have to assign overtime.

(HM) Pretty much yes.

(CC) You have removed the Company's proposed language regarding Mobile Maintenance and Resource Sharing. I take it you have rejected our proposal?

(HM) (long pause) I'm not going to say that the union objects to the company's proposal in that I understand the company's position, but as a representative for the members of the bargaining unit, it's not my duty to give their work away as a union representative my job is to protect their job. The utilization of Resource Sharing and MM is considered a threat to the union. And the loss of earnings for our employees and the reduction of man hours at our facility is unacceptable. That's the purpose or reason I asked the company if they would have any interest in mutual gains bargaining, meaning we can discuss these things and come to a mutual compromise. The whole thing about mutual gains bargaining is not for just one party to walk away with gains in the negotiations. It's the understating that the company don't get everything they want and the union don't get very thing they want. Just the point of resource sharing and mobile maintenance. If the company would agree to some sort of agency fee with these employees, these things could be considered. It's not a benefit to us for FirstEnergy employees from other locations or any other contractors to do our work while we are facing attrition at our location so there has to be a compromise and understanding of what we will gain from the company's proposal and what the company will gain. There's a lot of things we can work together but there would have to be a lot more movement on the company's part. The work that is normally done by us is what we are trying to protect. We are only trying to protect the work that we currently do at those facilities. I don't think that s too much to ask for.

(CC) I think we are at two opposite ends of the spectrum about how we feel about where we are going. You have asked for overtime in lieu of us bringing in contractors. We need to have the flexibility to utilize outside resources at Mansfield. This is a key issue.

(HM) We are not limiting the company's right, if you are willing to pay a contractor over any of our employees, that is not acceptable what you have to realize is that there's a limit. Once you have exhausted that limit and have gone through the provisions of that agreement. We can't stop you from bringing in contractors, all we're saying is respect the work force that is there. It's no different from what is being done now.

(CC) You're basically saying we have to work overtime before we bring in a contractor.

(HM) We are not saying that, we want to do the work that is done by contractors.

(CC) I am just trying to lay out where we are at and where you are at. We proposed that contractors, Mobile Maintenance and Resource Sharing can do some of your work. You proposed plant employees must be offered overtime before we can do that. That ignores the flexibility necessary to keep BMP in a competitive position, we can't go back to the previous. We need Mobile Maintenance and Resource Sharing (which allows us to keep BMP employees employed while working at other FE facilities). We're far apart on this subject.

(HM) Do you have a ballpark figure of the company's market cap is. Do you also understand that when you take that market cap for this company as a whole and divide it by the amount of employees that the company currently has that is a projection of over 900 million dollars, excuse me 900 thousand dollars per employee, is what this company is generating. That is almost a million dollars per employee.

(HM) All I am saying is again it is astronomical in reference to you wanting to give contractors and other FE employees to do our work. Why does the company think it is in their best interest not to keep the plant operating? The cost is already there. You are in much better shape than you was when we first started negotiations.

(CC) Why? In what way is the stock price dropping to \$30 show that we are doing better?

(HM) Your leadership is why our stock is where it is. If your leadership was more transparent the stock might be doing better. There is enough equity within the figure on the market cap that will sustain our facility whether you have resource sharing or mobile maintenance. It's not an issue.

(CC) It is a significant issue.

(HM) I have to protect our work. We must maintain our level of work that we have performed. If you can show one benefit.

(CC) A significant benefit is that the plant stays viable. Power is currently in the mid-twenties per MW. Something needs to be done regarding flexibility of operations.

(HM) You have a lean year now. The picture is getting brighter.

(CC) Read what the analysts say.

(HM) I am aware of that. The items we are talking is not going to sustain our debt. No one on this side of the table dug that hole. Even though the company doesn't look at the picture being

brighter and the decisions they have made in the past couple of months. You position yourself to sell of generation or you position yourself to continue to operate Mansfield.

(CC) The answer is in the middle, our CEO is committed to generation but it must be cash flow positive. Once we open the dewatering facility, we also have to spend money to get rid of waste, adding further pressure on the site.

(HM) I said to you about cash flow, you go through more money than you make. Only thing I can do is to make the quality of life in the facility that we work in better. That is all I can do. There is a way we can work together, if you don't want to meeting in the middle, my only other choice is to stand and protect the interests of the workers, that is my oath.

(CC) We offered everybody 8.5% which is about \$2.70 per hour, or six thousand dollars per person per year. We offered money to help people save for health care. We offered to freeze the pension and not change it for the term of the agreement with only the cash balance pension plan for new employees. We asked to expand the use of mobile maintenance to provide flexibility. We also asked to expand resource sharing so if business gets bad we can send people places to keep them working, avoid layoffs. There is a lot of give and gets on both sides.

(HM) On that note I can say to you we are miles apart. I don't see no give and take here. You want me to wholesale our jobs out. You want me to give our work away to people we don't represent and then you want to bring them in at higher wages than what we get paid.

(CC) You said you wanted your wages to get close to Sammis, we got you close to Sammis,

(HM) I want it to be at or above Sammis. And I only discussed that in sidebar. I have not communicated that across the table. On the inception of this whole negotiation we asked primarily for an extension. For the company to walk away and leave us alone. We have done nothing to create the condition of the plant or the company we are willing to help, but not at the expense of the benefits and wages of the employees. All we want is a fair deal. I don't care what has been agreed to by other unions and other locals. I don't negotiate for them, I only negotiate for people here.

(CC) I think we are there. Both sides are getting things. I can't say offering 6 to 7 thousand per year to workers is not offering something of value.

(RS) (Interrupting) If we made the same amount as the guys you want to bring in people here and you are paying them more. You want us to give away that right. You want us to stop doing the work so someone can come in to make more. All we are asking to protect the jobs we normally do.

(CC) I understand what you're asking and I appreciate that. It does not help the plant long term.

(RS) With all due respect I don't think you understand.

Herman asked for a break. (2:20 PM)

Return 3:00 PM

(HM) In reference to the severance policy,

(CC) Yes

HM That was also mentioned by the Company earlier.

(CC) No changes have been made nor are any contemplated. I will withdraw unless and until I get some approved changes, then I could possibly bring it back. I will withdraw that item.

(HM) Now, you are aware that what you have listed in there is a term of expiration that would have to be amended?

(CC) What do you mean would have to be amended.

(HM) In referencing the proposal that was given in side bar. It had initially stated three years and the one that was presented yesterday stated expiration with February 2017

(CC) It's always said that.

(HM) With the one that was in our last meeting, it said three years but it said 2017. It's not stating three years but the term is to 2017.

(CC) Right now that is three years from when the contract expired in February 2014.

(HM) Am I missing something here?

(CC) What do you mean?

(HM) I explained that would have to be amended. There is no way possible we can fit three years.

(CC) We are proposing an expiration date of Feb 15 of 2017. We are proposing that date. It's three years from the previous expiration date.

(HM) I'm still at a loss. Can you give me a bit more?

CC We are proposing a Feb 15, 2017 expiration date.

(HM) And that is factoring in what for that period.

(CC) You have a 7.5 % General Wage increase in our offer and that would equate to around 2.5% per year of the proposed contract.

(HM) The Company has no interest beyond 2017.

(CC) It's what we have put out there, if we get things resolved which seems fairly remote based on your positions, we can look at that.

(HM) I just want to make sure I understand what you are proposing.

(CC) Contract would end February 15 2017.

Union Caucus 3:05 PM to 3:10 PM

(HM) WE are willing to discuss term.

(CC) If we reach agreement on the other items, we would consider something different. Make us a proposal on a different term date.

(HM) In reference to FML, in the last meeting we had in sidebar, proposals that you gave me that was not part of that. What you presented to us yesterday you have added FML back into one of the items. I had indicated in negotiations that federal law is federal law and I am not here to negotiate changes to federal law. There is provisions that will allow the union and the company to enter into an agreement to run medical leave and sick leave concurrent. The only requirement is that it is agreed to. It would have to be a joint agreement between the union and the company. I'm not here to negotiate changes to federal law. Legislators felt that what they drafted would suffice to protect workers in the workplace.

(CC) Federal law allows us to run FML concurrent with sick leave.

(HM) No it allows us to agree to that.

(CC) We only proposed it because we have a practice of not doing that. The law doesn't prohibit us from agreeing to do that.

(HM) The law doesn't permit you to implement that without an agreement and we have no interest in that change. I don't want to jump around, but wanted to cover some things before we left today and wanted to address some things about us scheduling future dates. On the random alcohol testing, we have had past issues in reference to alcohol at the facility and the company has dealt with employees severely in reference to the issue. In the last two most recent cases, both employees are currently deceased. Now, at no time has the company by law under the ADA recognized that alcoholism falls under the disability act. Provisions for additional random testing as such you would also have to recognize that under the current disability act these employees are entitled to more than just a last chance agreement. The company have already established their own policy in reference to drugs and alcohol in the workplace that is an effective means of policing any issue that we may have. Our position is we have no interest in establishing a new random testing procedure. The company has a policy they can utilize. The only thing we would propose is that the company follow the guidelines under the ADA. That is all I have right now today. We will next week I would expect to receive a counter with regard to Resource Sharing, article 4 management rights.

(CC) With respect to the union's amended proposal on management rights and your request for overtime before contractors etc., I can tell you Herman that we have no interest at all in that proposal. It moves us in the opposite direction of where we need to take this facility. We have no interest.

(HM) Should we just make a list of the union's no interest and the company no interest that is basically what it's coming down to. I would suggest we adjourn and pursue this matter hopefully on a less stressful date.

(CC) OK we're adjourned (3:39 PM)

(HM) Do you want to continue on the available dates that you had given me?

(CC) Since those went to the end of September and you said these were the only dates we offered that you were available for, I filled up those remaining dates. I want to process what I've heard today and I will get back to you with more dates.

Negotiations –FirstEnergy and LU 272 December 8, 2014

Beaver Falls, PA

Company

Chuck Cookson

Fred VonAhn

Mike Rawlings

Tony Gianatasio

FMCS Mediator – Rick Queer

Union

Brian Petrunia

John Henry Craig

Kevin Wiley

Herman Marshman

Lonnie Cronin

Frank Snyder

Mike Welsh

Rich Torreson

Guy Taylor

RQ – Thank you to both sides for inviting Federal Mediation. I spoke w both sides to find out where you are at. I explained my role as a mediator in this negotiations, you both have used mediators in the past. The mediator will take notes, they are the property of the federal government. I would ask that in no time either side would subpoena the mediator. What we talk about in caucuses will be kept confidential unless you allow me to say it.

I don't say a whole lot in sessions, I let the parties talk. This is assisted mediation. I try to move the parties along at their comfort level.

CC Herman, you asked for this meeting. Where would you like to start?

HM We have some unfinished business.

EXHIBIT

GCX- 17

RT – The amount of people allowed off has been reduced from 12 to 5, there is not enough opportunity to take time off. The amount of vacation is going to have to be filled either way. I would like to have that looked at. There are safety issues.

CC – Mike, I think we can take that back and look at it.

FV - What safety issues do we have?

RT When you have morale issues, your brain is not working. If you have a workforce that is happy to be there your. One other issue we had that arose last Friday, The coal unloader broke down. The decision was made to contract that out to Enerfab. The decision was made that night and that they would continue to work through the night and then the job would be turned back over to FE. The decision was made to use inside maintenance and 2 yard, no OT involved. The jobs I am familiar with, the jobs would include the yard and inside Maintenance on OT. Utilizing another department might be the right way to do it rather than use contractors. We may need some guidelines to use other departments, like the plant overtime list. I just feel there are no guidelines on that issue.

MR I would be glad to sit w you monthly or more often to discuss these type of situations to see how they could be approached. We have not had our monthly contracting out meetings like we had. We would like to have them, there is no reason we cannot continue. Let us know when you are available. We're trying to bring this plant in on budget.

RT Why are we managing the budget the last month of the year. Why are we not using plant people throughout the year? There are a number of jobs contracted out throughout the year.

MR. We haven't had our regular monthly contracting out meetings and we would be glad to do that. I think that would help us explain where we are at each and every month.

HM Mr. Cookson, Initially in our communications I had indicated that I wanted to meet with the Senior Negotiating committee. The response was that there is no committee that exists within the company and you indicated that Tony had full binding authority and that you are the department that is responsible for negotiations. What is your title?

CC Executive Director of Labor Relations and Safety.

HM From your communication you are indicating that you have the final decision in reference to negotiations.

CC I, (like Tony) have the authority to, make binding offers for the Company. Tony has that same authority. He is the Company's chief negotiator for these negotiations.

HM Correct me if I am wrong, you do not have to report to anybody above you.

CC That is not what I said, I have the authority to make offers and engage in full settlement discussions in these negotiations, nobody else has to be sitting here.

HM Isn't there someone you report to.

CC I report to a lot of people.

HM You have the final decision.

EXHIBIT NO. 611 RECEIVED ✓ REJECTED

CASE NO. U-CA-163303 CASE NAME FirstEnergy

NO. OF PAGES 12 DATE 12/1/16 REPORTER JAO

CC What I do outside of this room is up to me. I have the authority to bind the company to terms and conditions, who I talk to is up to me.

HM Did you have final decision with 29 and for 457?

CC I am responsible to manage the negotiations process for FirstEnergy. . Jim Cole negotiated 457 and he works for me. I will make offers and those offers are binding. I am here to negotiate a deal for 272 just like I do and have done with other unions.

HM Are the agreements that you have negotiated consistent?

CC They are consistent but not exactly the same

IBEW Local 29 never had post 65 retiree health care. They had no notification that we were going to prepare to eliminate it. . They did not follow the company plan, so the announcement that retire health care was ending 12/31/14 did not apply to them.

UWUA 457 does follow our benefits plans and their retiree health care will end 12/31/14 and those employees covered "in the box" will have their coverage end 7/31/15 which is the expiration date of the former contract.

HM Basically what you are saying there have been exceptions in some agreements.

CC Some, but in every agreement, that had a medical box, that box ends at the end of 2014, unless that contract extended beyond 12/31/14 and then it has, in all but one case, ended at the end of that contract.

HM – Irregardless, even if 29 did not have post 65 health care, why did you offer to it was offered to subsidize health care up to age 65.

CC To give them time to make plans. This wasn't offered to IBEW 50, 245, 777, 777CC, 1194, 1413, 2357 and UWUA 118/126, 140, 350/351, 304, 457 and OPEIU 19. HM what is your nefarious scheme with us?

CC We have proposed that you would be treated the same as the vast majority of our other local unions.

HM All of those notices that the company did put out did not apply to 29?

CC They did not have the company's plan, the notices did not apply to them.

HM Are you aware of our issue? You understand the distinction between benefits, wages and compensation. We consider this benefit for the subsidies for health care, as separate from wages.

CC I understand your position.

HM Our position is that the company should provide some compensation for the loss of that benefit.

CC OK, I understand your position, not saying I agree but I understand.

HM And the reason we are here today to ask the company – what % of the cost savings the company is willing to share with the employees.

CC We would consider the following:

A contribution of \$500 for those with individual health care coverage and \$1000 for EE/Spouse, EE/Child and family coverage to their HSAs. If they do not participate in a FirstEnergy HSA, the money would be placed in their 401K account. This would be in each year of the contract. In addition, you can choose one of the options from below:

HM Why are you insulting me? You're fully aware of the money involved here, and the company is ready to walk away with a benefit that has been negotiated since day one.

CC We are in disagreement over how long those terms last.

HM Your purpose is to take that benefit away.

CC We wouldn't have a lawsuit over that if we didn't have a disagreement.

HM I requested to have senior execs here, you have not resolved the issues.

CC Just because I haven't resolved the issue to your satisfaction doesn't mean I don't have the authority to resolve the issue.

HM Do you think I am the other locals?

CC That doesn't mean I don't have the authority to exercise. We are here to negotiate a deal with 272.

.....etc. etc. etc.

CC (referring to the offer from previous sidebars). We offered you to continue the current box until the end of 2015 with a lower wage proposal. The contributions to the HSA could be included..

HM I think you are just doing your job, you didn't formulate the proposals, this was handed down to you, this is the direction that was given to you.

CC I have the full authority, I represent these proposals, I agree w these proposals, Please stop trying to twist my words.

HM Can we have five minutes?

Session broke at 1100 hrs.

1207 session resumed

HM Mr. Cookson if you could just entertain me I have 2 questions. Were you part of the committee that determined to terminate the subsidy for retiree health care?

CC It was a management decision. I don't know how to answer that.

HM Second follow up, you stated the reason why 29 rec'd the subsidies to the age 65 because their language was different than UWUA 457 because IBEW 29 never had the box.

CC That is one part of it yes.

HM That wasn't offered to UWUA 457 because they had the box and IBEW 29 didn't have the box. I would think it would be like the opposite, you are correct IBEW 29 never had the box in their language and IBEW 29 never shared in the cost of deferring the compensation that was paid by the company towards over 65 medical. Why would they get a better agreement than UWUA 457? I don't know when they agreed to Medicare part b equivalent. We have been sharing the cost for retirees cost since 96.

CC What do you mean by sharing the cost?

HM The Medicare part b equivalent. That was part of the medical in the box. You paid the Medicare part b equivalent, that continues until the age of 65, until that point in time you continued to pay under the federal government Medicare part b and the company would pay part of the coverage. We have offset the cost of the company, I would think we would have more equity in the game.

CC I guess Herman it's different and we could talk about why it's different and how they were notified.

HM IBEW 29 never had a leg in the game, they never paid Medicare part b.

CC We look at IBEW Local 29, differently from the way we look at IBEW 272 and UWUA 457 along with many of the other locals. UWUA 457 box ends in July 2015, this is how it was previously negotiated in 2011. People had a chance to make plans for what was going to happen to them going forward. The only people we negotiate for in 272 are in the box retirees and the nature of the benefit and the duration of the box.

HM You're tough.

CC Here's what we would be willing to do. I mentioned the \$500 and \$1000 previously. You don't have people in the FE HSA – for them we would put that into their 401K. Here is a comprehensive summary:

1. A contribution of \$500 for those with individual health care coverage and \$1000 for EE/Spouse, EE/Child and family coverage to their HSAs. If they do not participate in a FirstEnergy HSA, the money would be placed in their 401K account. This would be in each year of the contract. In addition, you can choose one of the options from below:
2. If you end the new retiree health care box 12/31/14 we would provide a general wage increase in each year of the contract as follows:
 - a. 3.0% at ratification
 - b. 2.5% one year after ratification
 - c. 2.5% two years after ratification
 - d. In addition we would provide a \$.75 equity adjustment to all classifications at the time of ratification
3. If you end the new retiree health care box 12/31/15 we would provide a general wage increase in each year of the contract as follows:
 - a. 2.5% at ratification
 - b. 2.0% one year after ratification
 - c. 2.0% two years after ratification
 - d. In addition we would provide a \$.75 equity adjustment to all classifications at the time of ratification

Let's talk about what an HSA is.

3

In FE under the 80/20 plan – its family coverage you are going to pay approximate \$3000 this year regardless if you use the coverage – then there is a \$1500 family deductible. You would pay approximately \$4500 and after that the plan coverage is at 80%/20%. You could put \$\$ into a flexible savings account and potentially be further ahead.

The FE base High Deductible Plan. It cost nothing per year, but has a \$5000 deductible per year. If you're expenses are less than \$4500, then you are saving money and you have the Company's annual contribution.

In an HSA acct – I can put approximately \$6600 per year tax free, whatever I don't use it carries over. It is a vehicle to use to save for retiree health care. When we talk about putting this money into the HSA, the account carries over and grows, much like your 401K.

The Health Care exchanges created by the ACA – if you make less than \$62,000 per year and are married, you are eligible for subsidized health care. The health care in the exchanges is less expensive than what a retiree pays for subsidized health care in the exchanges. I have a presentation I would be willing to go over with you guys, to show how the High Deductible Plans works and what is out there on the exchanges. There is a way for you to get subsidized health care from the government, through the Affordable Care Act.

When we say we will give contributions, it is every year for the term of the agreement. In summary,

1. \$500/\$1,000 contribution

End box 12/31/14 – 3.0%, 2.5% and 2.5% w 75 cents equity.

End box 12/31/15 2.5%, 2.0% and 2.0% and 75 cents equity.

We think that is a significant offer.

If you would like us to come back and review the HSA we can do that.

There is a \$1.25 million a year savings - see the information provided from our actuary regarding the savings to the Company for ending the retiree health care box at the end of 2014 vs. a spend of approximately \$1.0 million per year with our offer. I wanted to make sure I came to day and got that in front of you to think about.

HM – Not to take away from anything you have just said. We still have this right here. (Holds up stack of papers) of unresolved proposals. I think we're a long way from the company providing us with a package. We have been trying to resolve numerous other issues in and around negotiations. Primarily concerns of the company. There's still a lot of negotiations, on the safety, which safety and health is our primary concern within this negotiations. To present a consolidated package offer, is considered very premature at this stage even with the very numerous sessions

CC What safety and health concerns are out there?

HM I think you're aware, of the concerns presented to the company. These things are ongoing. We have yet to get to our real focus in these negotiations.

6

CC Help me with an example under safety and health.

HM A lot of it stems to the fact in an attempt to make claims, in the acute and chronic illness, the mortality rate, the cancer that exceeds the normal population. And the fact that our budget is being cut each and every year and makes our facility unsafe to work in. We have requested pre-warning systems to be installed. This isn't what I intended to go over. Mainly I wanted to go over the savings the company would get from the change it is requesting.

CC If there are issues, I think Mike was clear he would be willing to talk to you about these safety issues. Back in the early part of 2014 we met and discussed the safety manual and also reviewed your list of issues. At that time we offered to meet with you to discuss safety issues at any time.

HM I know Mike would do whatever is in his power to correct those concerns, Mike does not have an open check book. We are constricted by a budget. I had requested Tony Alexander personally, if he had any concern to maintain the viability of these plants, he would have to make an investment in these plants. He made the decision to reduce the budget by a billion dollars. Instead the company made investment in the regulated part of the business. When you have a facility that is over 40 years old and you need to make an investment to get them in working order. Let's make that investment to make those facilities to be in place so we can operate over the next ten years.

CC – They have a budget, they just have to spend it wisely.

HM – If you have a 20 year old car, you have to put money into it. Either you do it now or it is going to nickel and dime you for the remained for the life of the plant.

CC – I believe we are safe, I would ask that you get with Mike so we can rectify those items right away.

HM – We know the money is not available. If you are going to make that commitment that you are willing to spend the money needed on these plants.

CC – To say you are not willing to meet because there is not enough money does not make sense to me.

HM – The bottom line is, we need funding.

CC I just want to make one comment regarding your "cancer exceeds" allegations. Dr. Newman sent information sent to you in 2008 that the plant does not exceed the normal rates found in the general population.

HM I just wanted to meet with you to see if there was a reasonable way to distribute the saving from the elimination of the benefit.

CC I think our offer shows that we are flexible.

HM You are serious that you would entertain a counter offer.

CC I will entertain any offer that you come up with.

HM I asked the company to be more flexible, you can call that FE rewards.

CC Can I take that you reject our offer? I just showed that I am offering 80% back to you, I don't see how any of this shows we are not willing to bargain.

HM You are talking about for active EEs, we're more than willing to let the courts decide this issue.

CC When the box ends that is what we would save.

HM You're talking about a short term compensation for a lot of the individuals that will retire in a couple of years. For them it will be a benefit up until the point of death. We're miles apart here. I don't know if you are aware the government didn't fix the cost of HC they are just asking everyone to play a part in the cost.

CC In your opinion ...

HM The cost for a procedure is the same after Obama care as it was before Obama care. The corporation can't just walk away.

CC Based on our agreed to language, we can. .

MH You're walking away from retirees. You're taking one third of their benefit away from them. They have to sell their homes to pay for the cost of HC. I was hoping someone above you would have at least taken consideration. This has gone on long enough. They guys would like to have an agreement, but it becomes very difficult when we can't move past basic things. We want a portion of it (savings). What is going to happen to the Mansfield facility? We don't know what to negotiate on. I didn't bring you here to waste your time. You guys said we were a team, I did not see us become team players that respect each other to work together to achieve our common goal and our common goal is to keep the Mansfield facility up and running. I am not being unreasonable — there are ways to address it, be it the courts etc. We put a lot of equity in sweat into that company. When the co says we have to show a return to the shareholders we are shareholders, we are more valuable than the shareholders on Wall Street, and we help provide for our company. Just be fair.

CC I came here because it was important, with the authority to make offers and settle the outstanding issues. If that isn't enough, if you want to make a counter, we are more than willing to listen. I think the ball is in your court now.

HM You guys have been running up and down the court here. Have your committee had breakfast?

CC We can take a break for lunch and see where we go.

Recess 1250

Return 1429

HM I have a question — is it more expensive to maintain the opt out plans or the self-insured plans? Meaning, which one is more of a cost savings to the company.



CC We pay the union the same for the opt out plans as we pay for our own plans. You then go buy your plans. If we pay a thousand month for our plans we give the union a thousand dollars to go shop for a plan.

HM Maybe I'm asking this wrong. I'm looking at the self-insured plans in reference to the administrative costs and pay as you go. What that means is you have attributed a dollar amount that is paid in the self-insured plan and I have perceived the self-insured plan as a pay as you go plan. You would only pay towards a contribution if there is a claim made by the employee.

CC I haven't studied this. I think generally we don't see any difference. For the year we are paying you the same amount that we are paying the others.

HM Is that a true and accurate statement?

CC What we pay is based on the claims experience. Once we arrive at a set rate, we give it to the unions that opted out. There is no real advantage to FirstEnergy if you are opted out.

MW There are administrative fees

CC It's an aggregate rate, everything is baked into the number that we give to the opt out unions

Break 1434

Return 1440

HM Now the 1.2 figure that you provided to us. Even though I had asked basically what the savings would be for the company as a whole and also for the BM

CC All I was able to get you on this short notice was the actives and the in the box retirees, which was that letter.

HM As stated in there that amount includes the active employees and the in box employees under contract. Is that correct?

CC Yes

HM You had a question as far as clarification on taking into account attrition over the next several years

CC you talked about amortizing I wasn't sure what you mean by that.

HM I was talking about the 1.2.

CC They calculate that based on eliminating the benefit as of 12 31 14.

HM Is that dollar amount the projection if the retiree health care ends at the end of 2014?

CC If you did it at the end of 14, it wouldn't be much different if you did in 15. It gave us a place to give you an answer.

HM – If it would end the end of this year, without negotiating any termination period beyond that December 31 2014, and taking into account the attrition, between the termination period and the employees that would opt to retiree within that window.

CC They would be technically included in that number, but the actives would become in the box retirees.

HM When you say in the box I thought the company is proposing to end the box which means it would not apply – once an employee would retire there wouldn't be any in box employees, they would go to the market.

CC If our proposal was implemented. I don't know if there is any significance to saying your were active and you retired, the difference would be negligible.

HM Are you saying the company would consider the length of the term of agreement in reference to the in the box language. Or is the company proposing that in some mid-point in the agreement that box ends and it does not extend past that period.

CC We would offer you for reduced wages a new box that would go to the end of 2015. The new retiree would go into a new box and the plan would go to the end of 2015.

HM If they retire in 2015 would they be able to have subsidies until age 65.

CC No

HM Give me a minute.

Break 1449

Return 1451

HM From your last statement I'm going to assume that that was made in reference to the fact about us having post 65 retiree medical.

CC You mean our offer?

HM If an employee's retires before 12/31/ 15 that would not extend the subsidy to the age of 65

CC Correct.

HW What I was asking was the reason for that was us having the post 65 medical and you said that was the difference.

CC We have discussed that previously.

HM And that would mean that is not an option for our local.

CC Correct

HM Even though our local did not have any participation they never had the Medicare part b assessed to their pension. . I am kind of finding that hard to accept, we have been paying into this since 96 and you are offering a better benefit for employees who never paid into it.

CC We offered you our logic that is what we based our differences on.

HM So all this that we paid what did it do for us.

CC FE paid the majority of those costs.

HM My point is again, how can you make a better offer to a local that never had any participation?

CC I don't know how to explain any more than what our logic was.

HM You took our money and that was supposed to apply to help the company. You got me baffled and I don't see any logic in that decision. I would think the company would be more than willing to help those that contributed.

CC And they would have healthcare for 5 years and the others would have health care for 25 – 30 years.

HM Is this going to be something that we can get around?

CC I won't be in a position to give local 272 health care until the age of 65 for the reasons that I just explained.

HM You can't sit there with a serious face and say that. Do you know what kind of a position you are putting me in here? We can't even reach an agreement for a benefit that has been provide to us, we can't even get a compromise to formally compensate what is being lost

CC I've offered you a way to extend the new box to the end of 2015. .I offered contributions to the HSA as a way to deal with that going forward.

HM Has the company looked at the cost savings for our guys being paid less the Sammis employees?

CC I have not done a cost savings for you vs. Sammis.

HM Our employees have looked.

CC We offered a \$.75 cents per hour equity adjustment to help bridge that gap to every employee.

HM But why should we be paid less for the same work if you guys would show any good faith on any issue it would make it easier to consider – Chuck you really break my heart. I thought that we could move on. I thought the company would start moving in a direction that is the best interest of everyone.

CC We are not treating IBEW 272 that much different than 21 other locals, I don't know how we are that far off the mark. We're not.

HM Sorry for wasting your time.

CC Wasn't a waste at all.

HM I can't see any benefit, and I don't think anyone else on my side would.

Break at 1503

Return 1505

HM I can't even punt. I'm going to consider what we discussed today. As I eluded to earlier this is only one hurdle in reference to the negotiations we still got a lot more things to address. IF you don't have anything else that is all I have for today.

CC That is all I have

FV In response to your previous assertion that we do not spend any money at the plant, this year we spent \$32 million in capital at the plant and \$8 million in capital at little blue run. We spent over 40 million on the facility this year in capital improvements in 2104 alone.

End of day 1507

GENERAL COUNSEL EXHIBITS
BEFORE THE NATIONAL LABOR RELATIONS BOARD
REGION SIX

FIRST ENERGY CORPORATION

Employer

and

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, LOCAL UNION
272, AFL-CIO

Petitioner

Case No. 06-CA-163303
No. 06-CA-170901

Place: Pittsburgh, Pennsylvania

Date: Friday, December 2, 2016

MORSE, GANTVERG & HODGE, INC.
Suite 719, One Bigelow Square
Pittsburgh, Pennsylvania 15219
412/281-0189

Cowher, Thomas M.

From: Cowher, Thomas M.
Sent: Friday, September 18, 2015 6:27 AM
To: Graf, James E; Moul, Donald A; Lasky, Charles D.; Kotsenas, Peter J; Vonderembse, Anthony J.; Brown, Justin M; Cox, Christopher G.; Liberatore, John M.; Sammons, Phillip D.
Subject: Re: M116 Turbine Generator Outage - Labor to perform open-clean-close

Gentlemen,

The Bruce Mansfield Unit 1 Turbine-Generator outage is scheduled to start on March 19, 2016. We have been in discussions for several months regarding the labor required to open/clean/close the turbine and generator.

The outage team met with the Mechanical Maintenance Superintendent to discuss the available resources and the options for using the resources in the most effective manner. There will be approximately 50 men available in Mechanical Maintenance in the spring of 2016.

- Four shift crews of 6 men each will be required to support emergent work and PM activity on the running units
- A six man crew will be required to support the LBR closure plan.
- An eight man crew will be needed in each of the SO₂, Boiler, and Turbine Area to perform routine outage work that has always been performed in house.

The consensus was that the available resources from Mechanical Maintenance could not support the open/clean/close labor for a full train turbine outage, and the resources that will be available would be best utilized to perform routine day-to-day work, and to perform some outage work that has not historically been contracted out, including the 1A BFPT Overhaul, boiler safety valves and extraction check valves, and SO₂ area routine outage work.

We met several times with GE to discuss the possibility of GE performing the open/clean/close labor. GE provided a proposal to perform the outage and the current estimated cost is \$4.8M (Project Management/Field Engineers: 3,400 man-hrs = \$1.1M; Supervision & Craft: 33,200 man-hrs = \$3,700,000).

We have also met with Phil Sammons to discuss the possibility of the Mobile Maintenance (MM) workforce performing the open/clean/close labor. Phil reported that MM would be able to support the job with 30 mechanics. Subsequent discussions with the FE industrial relations department have resulted in a decision that it would be too risky to use MM in that capacity because the T/G work was always performed in house and using MM at this time would jeopardize ongoing negotiations with the union.

Based on my experience with outages at Bruce Mansfield from 1999 to the present, it is my opinion that the only reasonable alternative at this point in time is to contract with GE to perform the work, and based on my current projections we are only \$1.4M short to fully fund GE performing the labor.

Most of this shortfall can be eliminated by GE reducing their estimate to a more realistic estimate (item 1 below). The rest of the shortfall can be eliminated without additional scope reductions by the items identified below (items 2 – 4).

To enable the 2016 outage budget to cover the cost of GE performing the work, I recommend the following actions be completed ASAP:

1. Tom Cowher and Justin Brown meet with GE to refine their proposal. In my opinion, GE's estimate of 33,200 M/hrs for craft labor and supervision is excessive. The historical man-hours required to perform the same scope of work with FE employees is 20,000 – 25,000 m/hrs. If we can get GE to reduce their manpower to 20,000 – 25,000 m/hrs, the savings could be \$1 - \$1.5M.

ORIGINAL REPORT

3340

10/01/2018

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2. Phil Sammons to meet with Fort Martin outage team to determine if MM could perform the FM2 outage which is also in the Spring of 2016. The FM2 outage scope is smaller than the MN1 scope. GE's current estimate for FM2 is \$1.15M (Project Management/Field Engineers: 1,000 man-hrs = \$325,000; Supervision & Craft: 7,500 man-hrs = \$825,000). If the FM2 outage can be performed by MM, we should consider transferring the \$1.15M from the FM2 outage budget to the MN1 outage budget to avoid additional scope reductions at Bruce Mansfield.
3. If the FM2 outage does not require the entire 30 man crew from MM, then Phil Sammons, Tom Cowher and the Bruce Mansfield team meet to identify other work that MM could perform to reduce other contractor costs to free up as much money as possible to fund the GE cost.
4. Tom Cowher and the Bruce Mansfield outage team continue to scrub the 2016 capital project and O&M outage budgets to free up as much money as possible to fund the GE cost.

In summary, using the Bruce Mansfield workforce to perform routine work that they typically perform, using MM to perform the FM2 outage and possibly some other MN1 outage work, and using GE to perform the OCC labor for the MN1 TG would be the most effective use of all three groups and would be the best way to ensure a successful MN1 2016 TG outage. I am confident that we can fund the GE cost without additional scope reductions.

We have our next outage planning milestone due on Monday 9/21/15 – OTM10 Work Assigned to Performing Organization. I would like to get this issued resolved ASAP so that we can focus on preparing for the outage.

Thomas M. Cowher
Consultant - Technical Services
FirstEnergy Generation Corp.
Bruce Mansfield Power Plant
128 Ferry Hill Road
Shippingport, PA 15077
Phone 724-643-2452
FAX 330-761-7297
E-Mail cowhert@firstenergycorp.com

April 10, 2015

M116 Turbine-Generator Outage

Planning Meeting Summary

An internal FE meeting was held on 4/9/15 at the Bruce Mansfield Plant to discuss the GE proposal for the M116 Turbine-Generator scope.

The meeting started at 13:00 and ended at 14:30.

Chris Cox, Justin Brown, Jim Rhodes, Lou Pietrandrea, and Tom Cowher represented FirstEnergy.

Agenda:

- Review Justin Brown's 4/7/15 email with GE's most recent proposal
- Review Tom Cowher's 2/27/15 e-mail to Justin Brown with clarifications needed to GE's proposal dated February 23, 2015.
- Open discussion
- Discuss upcoming meetings/events

Discussion regarding GE's 4/7/15 proposal:

- GE offered a long shank bucket option for the L-3 rows, which GE would consider a permanent repair.
- Tom Cowher requested a proposal (AI 1) from T-G Advisers to develop a decision tree tool for the L-2 and L-3 dovetails. The proposal should be received by 4/17/15 for review.
- Based on our current level of knowledge, the L-2 dovetails on LPA and LPB (LPC L-2 rows replaced in 2002) should be considered part of the base scope.
- The L-3 dovetails on LPA-LPB-LPC are much less likely to need replaced, but the long shank L-3 proposal from GE would put us in a good position for the 2016-2017-2018 outages. If the L-3 long shank buckets are purchased in time for the 2016 U1 outage, and not needed, they would be available for an L-3 contingency plan for U2 in 2017 and U3 in 2018. The Unit 3 L-3 dovetails had the most indications based on the 2008-2010-2011 PAUT data.
- Justin Brown reported that FE has requested a proposal (AI 2) from Alstom for the LP turbine work. The tentative due date for the Alstom proposal 4/22/15 is At this time Alstom and GE are still doing business as two separate companies, and the timing/impact of the GE-Alstom merger is unclear.
- FE senior management (GEPRC committee) has requested a "Deep Dive" into the L-2 and L-3 Bucket/Dovetail project, with the possibility of a Unit 1 maintenance outage in the Fall of 2015 to do a "Tops Off" PAUT inspection of the LP rotors in situ. Chris Cox and Tom Cowher will meet (AI 3) with Fred Von Ahn and Jim Graf to discuss the expectations and timing for the deep dive.

EXHIBIT

GCX- 13

Appendix000604

Discussion regarding clarifications needed to GE's proposal dated February 23, 2015:

- GE's craft labor estimate seems excessive based on historical man/hours for Bruce Mansfield T-G outages. Tom Cowher, Justin Brown, and Moe Carrier will meet (AI 4) to discuss scope/schedule/manpower loading and refine the craft labor estimates. This will need to wait until the PY and BV outages are complete.
- Discussed IP rotor scope for 8th and 9th stage bucket replacements. The work will be most likely be performed in the Schenectady factory. We need information from GE (AI 5) on the amount of rotor runout they can accept and still be able to balance the rotor. We need a price and duration from GE (AI 6) to high speed balance the IP rotor.
- GE provided a price breakout for the L-2 and L-3 scope. Tom Cowher will develop a spreadsheet (AI 7) to show how the commitments would affect the L-2 and L-3 Buckets and Dovetail project and much capital remains to use to fund the craft labor portion.
- For the LP rotor SCC issue we need to ask GE to provide a detailed presentation (AI 8) on how many rows have been inspected since TIL-1277 was issued in 1999, and how many rows have been replaced due to SCC, and how many issues they have had with the fineline weld repair process. We should not need to wait until we get the PAUT data to have these discussion with their engineers at the factory. Tom Cowher requested this through Matt McGuire, but the GE response was limited to "PAC commented that experience/trends are still in line with what was presented back in 2005". Tom Cowher expressed concerns about presenting 10 year old data to the GEPRC committee.
- For the Reheat Diaphragms, GE needs to be more specific (AI 9) about what is included in their cost. We were very specific in what we identified for the 8th stage DF diaphragm. We need to know that GE has included the welding of the appendages and horizontal joints in their cost. The cost for the major repair of the 8th stage DF diaphragm should be separated from the 9th stage. The cost for the 8th Stage DF diaphragm needs to include replacing the sealing rings for the pre-warming pipe. GE needs to provide a price to recondition the flange for the pre-warming pipe, including new sealing rings. We stock a new pipe. GE will need to defend the 25 day duration for the reheat diaphragms. They have never been able to do a 25 day duration in the past.
- For the on-site diaphragm repairs, GE need to refine their estimate. Tom Cowher will clarify (AI 10) the historical issues for on-site diaphragm repairs and Moe Carrier will revise the GE pricing.

Open Discussion:

Lou Pietrandrea discussed the Generator and Exciter scope. The stator was re-wound in 2008 and the field was rewound with original copper in 2008. A hit-skid was performed in 2012 and one leak was repaired with the field in place. GE's proposal for on-site service includes generator testing, Hit Skid and Hit Skid support, etc. and states that the field removal can be performed at no additional charge if performed off critical path. GE needs to break out the cost (AI 11) for the Hit Skid, Hit Skid Support, and Generator Specialists so that the costs can be directed to the appropriate O&M or capital projects.

Upcoming meetings/events:

- Next GE/FE weekly alliance conference call 4/14/15 at 09:00. Call in number 866-546-4138 access code 648-0811#

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Action Item List:

- AI 1 Tom Cowher requested a proposal from T-G Advisers to develop a decision tree tool for the L-2 and L-3 dovetails. Due date 4/17/15
- AI 2 Justin Brown reported that FE has requested a proposal (AI 2) from Alstom for the LP turbine work. Due date 4/22/15
- AI 3 Chris Cox and Tom Cowher will meet (AI 3) with Fred Von Ahn and Jim Graf to discuss the GEPRC expectations for the deep dive into the L-2 and L-3 Bucket/Dovetail project. Due date 4/22/15
- AI 4 Tom Cowher, Justin Brown, and Moe Carrier to meet to discuss scope, schedule, manpower loading to refine the craft labor estimates. Due date 6/19/15
- AI 5 We need information from GE on the amount of rotor runout they can accept and still be able to balance the rotor. Due date 4/30/15
- AI 6 We need a price and duration from GE to high speed balance the IP rotor. Due date 4/30/15
- AI 7 Tom Cowher will develop a spreadsheet to show how the commitments for the L-2 and L-3 scope would affect the L-2 and L-3 Buckets and Dovetail project and much capital remains to use to fund the craft labor portion.
- AI 8 GE to provide a detailed presentation on how many rows have been inspected since TIL-1277 was issued in 1999, and how many rows have been replaced due to SCC, and how many issues they have had with the fineline weld repair process. Due Date 6/19/15
- AI 9 GE to clarify 8th Stage DF, 9th Stage TE, 9th Stage GE major repair scope, durations, and pricing. Due date 4/30/15
- AI 10 Tom Cowher will clarify (AI 10) the historical issues for on-site diaphragm repairs and Moe Carrier will revise the GE pricing. Due date 4/30/15
- AI 11 GE needs to break out the cost for the Hit Skid, Hit Skid Support, and Generator Specialists so that the costs can be directed to the appropriate O&M or capital projects. Due date 4/30/15

September 10, 2015

M116 Turbine-Generator Outage**Resources to perform open/clean/close labor**

A conference call was held on 9/1/15 to discuss the possibility of using the Mobile Maintenance (MM) resources to perform the open/clean/close (OCC) labor for the Bruce Mansfield Unit 1 Turbine Generator outage in the spring of 2016.

The Industrial Relations department reported that it would be too risky to use Mobile Maintenance in that capacity because the T/G work was always performed in house and using MM at this time would jeopardize ongoing negotiations with the union.

An action item was assigned to the outage team to identify work that MM could perform to offset the costs of using other contractors to perform other outage work and routine day-to-day work, to free up the internal maintenance resources to perform the OCC labor for the T-G.

The outage team identified \$450K of typical internal labor jobs and \$780K in typical contractor labor jobs that could be performed by MM to offset \$1,24M in outage costs.

The outage team had met previously with the Mechanical Maintenance Superintendent to discuss the available resources and the options for using the resources in the most effective manner. There will be approximately 50 men available in Mechanical Maintenance in the spring of 2016.

- Four shift crews of 6 men each will be required to support emergent work and PM activity on the running units
- A six man crew will be required to support the LBR closure plan.
- An eight man crew will be needed in each of the SO₂, Boiler, and Turbine Area to perform routine outage work that has always been performed in house.

The GE proposal to perform the OCC labor was revisited and an additional \$1.5M Capital and \$1.5M in O&M would be needed to pay GE to perform the OCC labor.

FM2 a turbine outage in the spring of 2016 and FM is currently planning to use GE to perform the OCC labor at an estimated cost of \$1.15M.

Recommended next steps:

- Review the list of possible MM jobs with Phil Sammons to determine how much work MM could perform to reduce outage costs.
- Review/refine GE proposal based on current scope
- Discuss the possibility of using GE at FM2 and transferring the \$1.15M to Mansfield to avoid additional scope reductions

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EXHIBIT

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Appendix000608

EXHIBIT NO. 6014 RECEIVED ☒ REJECTED ☐
CASE NO. U-CA-163303 CASE NAME FirstEnergy
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Cowher, Thomas M.

Subject: Future Mansfield Turbine/Generator Outages
Location: A-BM/Rm 126-Conference Rm or Conference Line: 330-436-2800,,8835701#
Start: Wed 1/28/2015 1:00 PM
End: Wed 1/28/2015 3:00 PM
Recurrence: (none)
Meeting Status: Accepted
Organizer: Brown, Justin M
Required Attendees: Tom Cowher (cowher@firstenergycorp.com); Pietrandrea, Luigi; Rhodes, James R; Cox, Christopher G.; Matt McGuire (matthew.mcguire@ge.com); Carrier, Maurice R (GE Power & Water); Rob Alexander (robert.alexander2@ge.com); Henkel, Jeffery (GE Power & Water); Schuchter, Phil; John Kosko (jkosko@firstenergycorp.com)
Optional Attendees: Lawrence, Ronald D.; Sternisha, Peter (GE Power & Water); Antoniades, Tony (GE Power & Water); Robinson, Leonard J.

RESCHEDULED: Scheduling conflict with Perry T2 Readiness Review, it was rescheduled due to weather. Please advise if this is not a good date.

All,

See attached for the preliminary scoping document for Unit 1 2016 Outage. This is the document that we will be discussing during the meeting. The scope for Unit 2 in 2017 and Unit 3 in 2018 will essentially be the same.



Preliminary Scope
Document for...

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CASE NO. _____ CASE NAME _____

NO. OF PAGES _____ DATE _____ REPORTER/NO.

EXHIBIT

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Appendix000610

EXHIBIT NO. GC15 RECEIVED ☒ REJECTED ☐
CASE NO. U-CA-163303 CASE NAME FirstEnergy
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Appendix000611

Actions		Show	Meeting Notes					
100%		7, 2015	10:00	11:00	12:00 PM	1:00	2:00	3:00
<input checked="" type="checkbox"/>	All Attendees							
<input checked="" type="checkbox"/>	<u>Brown, Justin M</u>							
<input checked="" type="checkbox"/>	<u>Cowher, Thomas M.</u>							
<input checked="" type="checkbox"/>	<u>Pietrandrea, Luigi</u>							
<input checked="" type="checkbox"/>	<u>Rhodes, James R</u>							
<input checked="" type="checkbox"/>	<u>Cox, Christopher G.</u>		nms & Mansfield					
<input checked="" type="checkbox"/>	<u>Matt McGuire (matthew.mc</u>							
<input checked="" type="checkbox"/>	<u>Carrier, Maurice R (GE Power</u>							
<input checked="" type="checkbox"/>	<u>Rob Alexander (robert.alex</u>							
<input checked="" type="checkbox"/>	<u>Henkel, Jeffery (GE Power &</u>							
<input checked="" type="checkbox"/>	<u>Schuchter, Phil</u>							
<input checked="" type="checkbox"/>	<u>Kosko, John F</u>							
<input checked="" type="checkbox"/>	<u>Lawrence, Ronald D.</u>							
<input checked="" type="checkbox"/>	<u>Sternisha, Peter (GE Power</u>							
<input checked="" type="checkbox"/>	<u>Antoniades, Tony (GE Power</u>							
<input checked="" type="checkbox"/>	<u>Robinson, Leonard J.</u>							

Options

Start time

Wed 1/28/2015



1:00 PM

End time

Wed 1/28/2015



3:00 PM

Bruce Mansfield Unit 1 Turbine-Generator Outage 2016

Preliminary Scope Document for Turbine Work

Main Stop Valve (MSV) Scope:

1. Remove floor grating and floor beams for access to the turbine valve platform.
2. Remove four (4) MSV insulation cans.
3. Remove four (4) MSV upper heads.
4. Remove four (4) MSV coarse mesh screen steam strainers.
5. Disassemble the four (4) MSV couplings and unbolt the MSV pressure seals heads.
6. Remove the four MSV internal valve assemblies to be reconditioned by others.
7. Inspect four (4) MSV seats and anti-lean rings for damage, loose bolts, worn anti-rotation pins.
8. Prepare the MSV steam chest for internal and external grit blasting for NDE.
9. Clean all MSV upper head studs for UT inspection by others.
10. Support on site machine polishing of the MSV seats, and polishing of the pressure seal head gasket contact areas by others.
11. Perform blue checks of the MSV seats and pressure seal head gasket contact areas.
12. Install four spare MSV internal valve assemblies.
13. Install four spare MSV fine mesh screen steam strainers.
14. Reassemble the MSV pressure seal jacking rings, dust covers, and couplings.
15. Support valve stroking/calibration to be performed by the GE Mark VI controls engineer.

A

Control Valve (CV) Scope:

1. Remove floor grating and floor beams for access to the turbine valve platform.
2. Remove valve linkage/closing spring can assemblies from two of the four control valves (CV1 and CV2) to be shipped out and reconditioned by others.
3. Remove/disconnect leak-off piping from the CV1 and CV2 control valves.
4. Remove the CV1 and CV2 valve assemblies from the steam chest to be shipped out and reconditioned by others.
5. Prepare the CV seats for grit blasting and NDE.
6. Clean all CV1 and CV2 stand studs for UT inspection by others.
7. Support on site machine polishing of the CV1 and CV2 seats by others.
8. Perform blue checks of the CV1 and CV2 seat contact areas.
9. Install CV1 and CV2 valve assemblies. Torque all studs and nuts to OEM specs.
10. Install/reconnect leak-off piping to the CV1 and CV2 control valves.
11. Reassemble all CV1 and CV2 control valve linkage.
12. Support valve stroking/calibration to be performed by the GE Mark VI controls engineer.

Combined Reheat Valve (CRV) Scope:

1. CRV insulation blankets will be removed/reinstalled by others
2. Remove LS and RS Intercept valve linkage pins.
3. Remove the LS and RS Intercept valve assemblies to be shipped out and reconditioned by others.
4. Remove the LS and RS CRV steam strainers to be grit blasted and NDE on site by others.
5. Remove the RS Reheat Stop Valve assembly to be shipped out and reconditioned by others.
6. Prepare the CRV seats for grit blasting and NDE.
7. Clean all CRV studs for UT inspection by others.
8. Support on site machine polishing of the LS and RS CRV seats by others.
9. Perform blue checks of the LS and RS Intercept Valve and RS Reheat Stop Valve seat contact areas.
10. Install a spare rebuilt RHSV assembly into the RS RHSV.
11. Install the LS and RS CRV steam strainers.
12. Install the LS and RS Intercept valve assemblies
13. Reassemble all LS and RS Intercept valve linkage.
14. Support valve stroking/calibration to be performed by the GE Mark VI controls engineer.

Front Standard Scope:

15. Remove Instrumentation
16. Unbolt T1 TE Oil Deflector U/H
17. Remove HP TE U/H Centerline Keys
18. Remove Front Standard Cover
19. Remove U/H and L/H T1 TE oil deflector and bolt together to be shipped out for repair by others.
20. Remove T1 Tilt-pad bearing U/H and L/H to be inspected and reconditioned by others.
21. Remove MOP U/H
22. Cover all opening with appropriate FME devices
23. Perform dimensional inspection of MOP impeller and casing rings
24. Perform dimensional inspection of Steady Rest Bearing and control rotor journal
25. Clean all front standard bolting and joints for reassembly.
26. Perform Front Standard friction check.
27. Remove front standard guide rail blocks, clean and shim to obtain the proper guide rail clearance, and reinstall.
28. Lubricate Front Standard slides and guide rail blocks.
29. Perform a complete reassembly of all Front Standard components.
30. Install/Remove oil flush piping to support flushing the T1 bearing and MOP. Support the oil flush while in progress.

HP Turbine section scope:

1. HP Turbine insulation blankets will be removed/reinstalled by others
2. Disassemble MSI inlet flanges LS and RS. Inspect all MSI flange studs by MT method per TIL 951-1. Inspect MSI flanges for dishing/cracking issues. Perform dimensional inspection of the MSI flange male and female spigot fits.
3. Perform a complete disassembly of the HP Turbine section for removal of the rotor, removal of HP inner shell U/H and L/H, removal of the nozzle U/H and L/H, and removal of all HP diaphragms (stages 2 -10). Induction bolt heating services will be provided by _____. Hydraulic bolting services will be provided by _____.
4. Removal of all HP turbine packing rings, including N1 and N2 inner and outer packing head packing rings.
5. Clean all MSI Inlet flange, HP outer shell, inner shell, diaphragm, N1, and N2 turbine bolting for NDE and to prepare for reassembly.
6. Grit blast all HP turbine parts for inspection.
7. Perform MT inspection of all HP turbine rotating and stationary components.
8. Perform UT inspection of all HP turbine studs.
9. Perform dimensional inspection of HP Turbine T1 and T2 bearing journals.
10. Perform clearance measurements of all HP turbine steam path clearances in the "as found" and as left conditions.
11. Support the steam path audit as needed.
12. Provide labor to move all HP turbine components as needed for grit blast, NDE, and on site repairs.
13. Provide labor to support the laser alignment of all HP turbine stationary components. Laser alignment services to be provided by _____.
14. Perform dimensional inspections of four HP turbine steam inlet expansion joint assemblies.
15. Perform replacement of the two (2) HP Turbine 1st stage pressure tap pipes.
16. **Replace all HP turbine packing rings, including N1 and N2 inner and outer.**
17. **Replace all HP Turbine section spill strips.**
18. **Perform minor partition repairs to all HP turbine diaphragms on site.**
19. Perform complete reassembly of the HP turbine section, including all necessary alignment moves, key changes, and key transfers.

Mid Standard (A Coupling) Scope:

1. Remove Instrumentation
2. Install shell jacks to push HP turbine shell toward the TE to allow the A coupling to be separated.
3. Unbolt T2 GE and T3 TE Oil Deflector U/H
4. Remove IP TE U/H Centerline Keys
5. Remove Mid Standard Cover
6. Remove U/H and L/H T2 GE and T3 TE oil deflector and bolt together to be shipped out for repair by others.
7. Removal of the A coupling guard U/H and L/H.
8. Remove T2 and T3 Tilt-pad bearing U/H and L/H to be inspected and reconditioned by others.
9. Perform thrust bearing bump check prior to disassembly and after reassembly of the thrust bearing.
10. Removal of the Thrust Bearing (including all components) be inspected and reconditioned by others.
11. Cover all opening with appropriate FME devices
12. Perform rotor radial position checks prior to and after the disassembly and separation of the A coupling, and to support the laser alignment process.
13. Perform a complete disassembly of the A Coupling. Clean all A coupling studs, nuts, and lock plates for reassembly. Clean the ID of all A coupling bolt holes for reassembly.
14. Perform a complete 16 point coupling check of the A" coupling during disassembly and reassembly, including all necessary alignment moves to correct the alignment as needed.
15. Clean all Mid standard bolting and joints for reassembly.
16. Remove Mid standard guide rail blocks, clean and shim to obtain the proper guide rail clearance, and reinstall.
17. Lubricate Mid Standard slides and guide rail blocks.
18. Perform a complete reassembly of all Mid Standard components.
19. Install/Remove oil flush piping to support flushing the T2, T3, and Thrust bearings. Support the oil flush while in progress.

Crossover Pipe Scope:

1. Install crossover pipe locking bolts as required to remove the crossover pipes.
2. Perform complete removal of the IP, LPA, LPB, and LPC crossover pipe to support a complete disassembly of the main turbine.
3. All Turbine scaffolding services as well as Crossover Pipe scaffolding will be erected, adjusted, and dismantled by Brand, direct billed to FE.
4. All turbine insulation work will be provided by Burnham, direct billed to FE.
5. Move all crossover pipes to the appropriate laydown location. All crossover pipes will be cribbed up to enable cleaning of the flange/gasket surfaces.
6. Clean all crossover pipe bolting for NDE and to support reassembly.
7. Perform a visual inspection of all crossover pipe bellows.
8. Reinstall crossover pipes when turbine assembly requires, includes torqueing of all bolts to OEM specs. New Crossover Pipe spiral wound gaskets to be provided by FE.

IP Turbine section scope:

1. IP Turbine insulation blankets will be removed/reinstalled by others
2. Perform a complete disassembly of the IP Turbine section for removal of the rotor, removal of IP inner shells (4) U/H and L/H, and removal of all IP diaphragms (stages 11 -17). Induction bolt heating services will be provided by _____. Hydraulic bolting services will be provided by _____.
3. Removal of all IP turbine packing rings, including N3 and N4 inner and outer packing head packing rings.
4. Clean all IP outer shell, inner shell, diaphragm, N3, and N4 turbine bolting for NDE and to prepare for reassembly. Grit blast all IP turbine parts for inspection. Grit blasting services will be provided by _____.
5. Perform MT inspection of all IP turbine rotating and stationary components.
6. Perform UT inspection of all IP turbine studs.
7. Perform dimensional inspection of IP Turbine T3 and T4 bearing journals.
8. Perform clearance measurements of all IP turbine steam path clearances in the "as found" and as left conditions.
9. Support the steam path audit as needed.
10. Provide labor to move all IP turbine components as needed for grit blast, NDE, and on site repairs.
11. Provide labor to support the laser alignment of all IP turbine stationary components. Laser alignment services to be provided by _____.
12. Perform removal of and reinstallation of the Heating Steam Feed Valve (HSFV) and associated piping to support disassembly of the IP outer shell. The HSFV shall be reconditioned by others prior to reassembly.
13. Perform removal of, reconditioning of, and reinstallation of the IP pre-warming pipe/flange assembly. New sealing rings in the flange to be provided and machined by the contractor. New pre-warming pipe (snout) to be provided by FE.
14. Replace all IP turbine packing rings, including N3 and N3 inner and outer. New packing rings to be provided by others.
15. Replace all IP Turbine section spill strips. New spill strips to be provided by others.
16. Perform major 410 SS repairs (off site) to the 11th Stage DF Diaphragm, 12th Stage TE and 12 Stage GE diaphragms.
17. Perform HVOF chromium carbide coating to the coating 11th Stage DF Diaphragm, 12th Stage TE and 12 Stage GE diaphragms.
18. Perform minor (Inconel) partition repairs to all remaining IP turbine diaphragms on site.
19. Install a boring bar to measure and machine the IP turbine inner shell fits for the 11th Stage DF diaphragm.
20. Perform a complete replacement of the IP Turbine rotor 11th and 12 stage buckets and covers with like-in-kind buckets and covers.
21. Perform rotor runout checks to determine the amount of permanent bow in the rotor.
22. Perform optional rotor straightening and/or high speed balancing services to minimize the impact of the rotor bow on the operation of the turbine.
23. Perform complete reassembly of the IP turbine section, including all necessary alignment moves, key changes, and key transfers.

B Coupling (T4/T5 Bearing) Standard Scope:

1. Remove Instrumentation
2. Unbolt T4 GE Oil Deflector U/H
3. Remove IP GE U/H Centerline Keys
4. Remove T4/T5 Bearing Standard Outer Cover
5. Remove U/H and L/H T4 GE and T5 TE oil deflector and bolt together to be shipped out for repair by others.
6. Removal of the B coupling guard U/H and L/H.
7. Remove T4 Tilt-pad bearing U/H and L/H and T5 Journal Bearing U/H and L/H to be inspected and reconditioned by others.
8. Cover all opening with appropriate FME devices
9. Perform rotor radial position checks prior to and after the disassembly and separation of the B coupling, and to support the laser alignment process.
10. Perform a complete disassembly of the B Coupling. Clean all B coupling studs, nuts, and lock plates for reassembly. Clean the ID of all B coupling bolt holes for reassembly.
11. Perform a complete 16 point coupling check of the B coupling during disassembly and reassembly, including all necessary alignment moves to correct the alignment as needed.
12. Clean all standard bolting and joints for reassembly.
13. Perform a complete reassembly of all B Coupling (T4/T5 Bearing) Standard components.
14. Install/Remove oil flush piping to support flushing the T4 and T5 bearings. Support the oil flush while in progress.

W

LPA Turbine section scope:

1. Perform a complete disassembly of the LPA Turbine section for removal of the rotor, removal of U/H LPA inner shells, and removal of all LPA diaphragms (stages 18 -23). Hydraulic bolting services will be provided by _____.
2. Remove all LPA inner shell studs to enable decking to be installed to provide a safe work surface. Install all LPA inner shell studs for reassembly.
3. Removal of all LPA turbine packing rings, including N5 and N6 inner and outer packing head packing rings.
4. Clean all LPA outer shell, inner shell, diaphragm, N5, and N6 turbine bolting for NDE and to prepare for reassembly.
5. Grit blast all LPA turbine parts for inspection. Grit blasting services will be provided by Arco Enterprises, direct billed to FE.
6. Perform MT inspection of all IP turbine rotating and stationary components.
7. Perform UT inspection of all IP turbine studs.
8. **Perform the following NDE inspections on the LPA rotor:**
 - a. Perform a 100% Wet Magnetic Fluorescent Particle inspection of the LPA rotor.
 - b. Perform a Phased Array UT inspection of the L-1, L-2, L-3, and L-4 dovetails on the LPA rotor.
 - c. Perform a 100% L-0 bucket dovetail pin UT inspection on the LPA rotor.
 - d. Perform bucket lift checks on the admission and discharge side of the L-1 through the L-5 buckets on the LPA rotor.
 - e. Perform Zygo inspection of all titanium buckets and stellite erosion shields on the LPA rotor.
9. Perform dimensional inspection of LPA Turbine T5 and T6 bearing journals.
10. Perform clearance measurements of all LPA turbine steam path clearances in the "as found" and as left conditions.
11. Support the steam path audit as needed.
12. Provide labor to move all LPA turbine components as needed for grit blast, NDE, and on site repairs.
13. Provide labor to support the laser alignment of all LPA turbine stationary components. Laser alignment services to be provided by _____.
14. **Replace all LPA turbine packing rings, including N5 and N6 inner and outer. New packing rings to be provided by others.**
15. Perform minor (Inconel) partition repairs to all LPA turbine diaphragms on site.
16. **Perform off site repairs to the LPA rotor to include the following:**
 - a. Replace all L-0 bucket covers like-in-kind and machine the cover O.D. to the proper diameter.
 - b. Replace all L-2 TE and GE buckets and covers like-in-kind with new buckets
 - c. Replace the L-2 rotor dovetails with the fineline/forged ring repair process to eliminate SCC in the dovetails.
 - d. Replace all L-3 TE and GE buckets and covers like-in-kind with new buckets
 - e. Replace the L-3 rotor dovetails with the fineline/forged ring repair process to eliminate SCC in the dovetails.
 - f. Perform low speed balancing of the LPA rotor after all repair work is completed.
 - g. Provide all transportation, permits, shipping skids, loading and unloading, to repair the LPA rotor in the contractor's service shop.
17. Perform complete reassembly of the LPA turbine section, including all necessary alignment moves and key changes.

C Coupling (T6/T7 Bearing) Standard Scope:

1. Remove Instrumentation
2. Unbolt T6 GE and T7 TE Oil Deflector U/H
3. Remove T6 Bearing Standard Outer Cover
4. Remove U/H and L/H T6 TE and T6 GE oil deflectors and bolt together to be shipped out for repair by others.
5. Unbolt T7 TE Oil Deflector U/H
6. Remove T7 Bearing/C Coupling Standard Outer Cover
7. Remove U/H and L/H T7 TE and T7 GE oil deflectors and bolt together to be shipped out for repair by others.
8. Removal of the C coupling guard U/H and L/H.
9. Remove T6 and T7 Journal Bearing U/H and L/H to be inspected and reconditioned by others.
10. Cover all opening with appropriate FME devices
11. Perform rotor radial position checks prior to and after the disassembly and separation of the C coupling, and to support the laser alignment process.
12. Perform a complete disassembly of the C Coupling. Clean all C coupling studs, nuts, and lock plates for reassembly. Clean the ID of all C coupling bolt holes for reassembly.
13. Perform a complete 16 point coupling check of the C coupling during disassembly and reassembly, including all necessary alignment moves to correct the alignment as needed.
14. Clean all standard bolting and joints for reassembly.
15. Perform a complete reassembly of all C Coupling and T6/T7 Bearing Standard components.
16. Install/Remove oil flush piping to support flushing the T6 and T7 bearings. Support the oil flush while in progress.

(14)

LPB Turbine section scope:

1. Perform a complete disassembly of the LPB Turbine section for removal of the rotor, removal of U/H LPB inner shells, and removal of all LPB diaphragms (stages 18 -23). Hydraulic bolting services will be provided by _____.
2. Remove all LPB inner shell studs to enable decking to be installed to provide a safe work surface. Install all LPB inner shell studs for reassembly.
3. Removal of all LPB turbine packing rings, including N7 and N8 inner and outer packing head packing rings.
4. Clean all LPB outer shell, inner shell, diaphragm, N7, and N8 turbine bolting for NDE and to prepare for reassembly.
5. Grit blast all LPB turbine parts for inspection. Grit blasting services will be provided by Arco Enterprises, direct billed to FE.
6. Perform MT inspection of all LPB turbine rotating and stationary components.
7. Perform UT inspection of all LPB turbine studs.
8. Perform the following NDE inspections on the LPB rotor:
 - a. Perform a 100% Wet Magnetic Fluorescent Particle inspection of the LPB rotor.
 - b. Perform a Phased Array UT inspection of the L-1, L-2, L-3, and L-4 dovetails on the LPB rotor.
 - c. Perform a 100% L-0 bucket dovetail pin UT inspection on the LPB rotor.
 - c. Perform bucket lift checks on the admission and discharge side of the L-1 through the L-5 buckets on the LPB rotor.
 - d. Perform Zygo inspection of all titanium buckets and stellite erosion shields on the LPB rotor.
9. Perform dimensional inspection of LPB Turbine T7 and T8 bearing journals.
10. Perform clearance measurements of all LPB turbine steam path clearances in the "as found" and as left conditions.
11. Support the steam path audit as needed.
12. Provide labor to move all LPB turbine components as needed for grit blast, NDE, and on site repairs.
13. Provide labor to support the laser alignment of all LPB turbine stationary components. Laser alignment services to be provided by _____.
14. Replace all LPB turbine packing rings, including N7 and N8 inner and outer. New packing rings to be provided by others.
15. Perform minor (Inconel) partition repairs to all LPB turbine diaphragms on site.
16. Perform off site repairs to the LPB rotor to include the following:
 - a. Replace all L-0 bucket covers like-in-kind and machine the cover O.D. to the proper diameter.
 - b. Replace all L-2 TE and GE buckets and covers like-in-kind with new buckets
 - c. Replace the L-2 rotor dovetails with the fineline/forged ring repair process to eliminate SCC in the dovetails.
 - d. Replace all L-3 TE and GE buckets and covers like-in-kind with new buckets
 - e. Replace the L-3 rotor dovetails with the fineline/forged ring repair process to eliminate SCC in the dovetails.
 - f. Perform low speed balancing of the LPB rotor after all repair work is completed.
 - g. Provide all transportation, permits, shipping skids, loading and unloading, to repair the LPB rotor in the contractor's service shop.
17. Perform complete reassembly of the LPB turbine section, including all necessary alignment moves and key changes.

D Coupling (T8/T9 Bearing) Standard Scope:

1. Remove Instrumentation
2. Unbolt T8 GE and T9 TE Oil Deflector U/H
3. Remove T8 Bearing Standard Outer Cover
4. Remove T9 Bearing/D Coupling Standard Outer Cover
5. Remove U/H and L/H T8 TE, T8 GE, T9 TE, and T9 GE oil deflectors and bolt together to be shipped out for repair by others.
6. Removal of the D coupling guard U/H and L/H.
7. Remove T8 and T9 Journal Bearing U/H and L/H to be inspected and reconditioned by others.
8. Cover all opening with appropriate FME devices
9. Perform rotor radial position checks prior to and after the disassembly and separation of the D coupling, and to support the laser alignment process.
10. Perform a complete disassembly of the D Coupling. Clean all D coupling studs, nuts, and lock plates for reassembly. Clean the ID of all D coupling bolt holes for reassembly.
11. Perform a complete 16 point coupling check of the D coupling during disassembly and reassembly, including all necessary alignment moves to correct the alignment as needed.
12. Clean all standard bolting and joints for reassembly.
13. Perform a complete reassembly of all D Coupling and T9/T9 Bearing Standard components.
14. Install/Remove oil flush piping to support flushing the T8 and T9 bearings. Support the oil flush while in progress.

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LPC Turbine section scope:

1. Perform a complete disassembly of the LPC Turbine section for removal of the rotor, removal of U/H LPC inner shells, and removal of all LPC diaphragms (stages 18 -23). Hydraulic bolting services will be provided by _____.
2. Remove all LPC inner shell studs to enable decking to be installed to provide a safe work surface. Install all LPC inner shell studs for reassembly.
3. Removal of all LPC turbine packing rings, including N9 and N10 inner and outer packing head packing rings.
4. Clean all LPC outer shell, inner shell, diaphragm, N9, and N10 turbine bolting for NDE and to prepare for reassembly.
5. Grit blast all LPC turbine parts for inspection. Grit blasting services will be provided by Arco Enterprises, direct billed to FE.
6. Perform MT inspection of all LPC turbine rotating and stationary components.
7. Perform UT inspection of all LPC turbine studs.
8. Perform the following NDE inspections on the LPC rotor:
 - a. Perform a 100% Wet Magnetic Fluorescent Particle inspection of the LPC rotor.
 - b. Perform a Phased Array UT inspection of the L-1, L-2, L-3, and L-4 dovetails on the LPC rotor.
 - c. Perform a 100% L-0 bucket dovetail pin UT inspection on the LPC rotor.
 - d. Perform bucket lift checks on the admission and discharge side of the L-1 through the L-5 buckets on the LPC rotor.
 - e. Perform Zyglo inspection of all titanium buckets and stellite erosion shields on the LPC rotor.
9. Perform dimensional inspection of LPC Turbine T9 and T10 bearing journals.
10. Perform clearance measurements of all LPC turbine steam path clearances in the "as found" and as left conditions.
11. Support the steam path audit as needed.
12. Provide labor to move all LPC turbine components as needed for grit blast, NDE, and on site repairs.
13. Provide labor to support the laser alignment of all LPC turbine stationary components. Laser alignment services to be provided by _____.
14. Replace all LPC turbine packing rings, including N9 and N10 inner and outer. New packing rings to be provided by others.
15. Perform minor (Inconel) partition repairs to all LPC turbine diaphragms on site.
16. Perform off site repairs to the LPC rotor to include the following:
 - a. Replace all L-0 bucket covers like-in-kind and machine the cover O.D. to the proper diameter.
 - b. Replace all L-2 TE and GE buckets and covers like-in-kind with new buckets
 - c. Replace the L-2 rotor dovetails with the fineline/forged ring repair process to eliminate SCC in the dovetails. Note: Unit 1 LPC Rotor L-2 Dovetails TE and GE were replaced in 2002.
 - d. Replace all L-3 TE and GE buckets and covers like-in-kind with new buckets
 - e. Replace the L-3 rotor dovetails with the fineline/forged ring repair process to eliminate SCC in the dovetails.
 - f. Perform low speed balancing of the LPC rotor after all repair work is completed.
 - g. Provide all transportation, permits, shipping skids, loading and unloading, to repair the LPC rotor in the contractor's service shop.
17. Perform complete reassembly of the LPC turbine section, including all necessary alignment moves and key changes.

E Coupling (T10 Bearing) Standard Scope:

1. Remove Instrumentation
2. Unbolt TG GE Oil Deflector U/H
3. Remove TG Outer Cover
4. Remove U/H and L/H TG TE, TG GE oil deflectors and bolt together to be shipped out for repair by others.
5. Removal of the "E" coupling guard U/H and L/H.
6. Remove T10 Bearing Standard Outer Cover
7. Remove U/H and L/H T10 TE, T10 GE oil deflectors and bolt together to be shipped out for repair by others.
8. Remove T10 Journal Bearing U/H and L/H to be inspected and reconditioned by others.
9. Cover all opening with appropriate FME devices
10. Perform rotor radial position checks prior to and after the disassembly and separation of the "E" coupling, and to support the laser alignment process.
11. Perform a complete disassembly of the E Coupling. Clean all E coupling studs, nuts, and lock plates for reassembly. Clean the ID of all E coupling bolt holes for reassembly.
12. Perform a complete 16 point coupling check of the "E" coupling during disassembly and reassembly, including all necessary alignment moves to correct the alignment as needed.
13. Clean all standard bolting and joints for reassembly.
14. Perform a complete reassembly of all E Coupling and T10 Bearing Standard components.
15. Install/Remove oil flush piping to support flushing the T10 bearing. Support the oil flush while in progress.

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Turbine Lube Oil System Scope:

1. Remove the waterbox covers on the East and West TLO coolers, and remove the 4" blind flange from the bottom of the return cover to support HP water cleaning of the tubes by others.
2. Remove the Lube Oil Booster Pump from the TLO reservoir and perform a complete disassembly, inspection, and reassembly of the Lube Oil Booster Pump.
3. Remove the TGOP motor and TGOP from the reservoir. The TGOP motor and TGOP will be reconditioned by others. Reinstall the TGOP motor and TGOP and align the TGOP motor to the TGOP. Motor will be unwired and re-wired by FE electricians.
4. Install/Remove oil flush piping to support an in-house turbine lube oil flush. Support the oil flush while in progress.
5. Support a Remove Visual Inspection (RVI) of the TLO piping as needed to ensure the cleanliness of all TLO piping prior to startup. RVI services to be provided by others.

Turbine Auxiliary Valve Scope:

1. Perform a complete disassembly, inspection, and reassembly of the Ventilator Valve. Perform blue contact checks of the seating areas.
2. Perform a complete disassembly, inspection, and reassembly of the Equalizer Valve. Perform blue contact checks of the seating areas.
3. Perform removal of and reinstallation of the Heating Steam Feed Valve (HSFV) and associated piping to support disassembly of the IP outer shell. The HSFV shall be reconditioned by others prior to reassembly.



GE Power & Water

COMMERCIAL RESPONSE

To

**FirstEnergy Service Company
Bruce Mansfield Station**

Unit # 1

Turbine / Generator S/N 170X479 / 180X479

For

**Bruce Mansfield Unit 1
Turbine-Generator Outage 2016**

**Preliminary Scope Document for Turbine
Work**

GE Power & Water

Reference Number 928171 R0

February 23, 2015

GE Power Generation Services
4930 Buttermilk Hollow Rd.
West Mifflin, PA 15122

EXHIBIT
GCX- 16

Appendix000631



GE Power & Water

Proprietary Statement

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Matt McGuire, Service Manager at (412) 469-6059
Moe Carrier, GE-FE Alliance Contract Manager at (815) 355-1705

EXHIBIT NO. 62116 RECEIVED ☒ REJECTED ☐
CASE NO. 18-CA-163303 CASE NAME FirstEnergy
NO. OF PAGES 13 DATE 10/2/16 REPORTER JAO



GE Power & Water

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Workscope

The following commercial response is associated to FE's Bruce Mansfield Unit 1 Turbine-Generator Outage 2016 - Preliminary Scope Document for Turbine Work as discussed on 01/28/15 at the Bruce Mansfield plant.

Proposed Scope and Duration

Workscope		Duration
On Site Services, Including Craft Labor		65-70 Days
On Site Services, No Craft Labor		65-70 Days
Reheat Rotor		13 Days
Replace 8th stage buckets (TE & GE)		
Replace 9th stage buckets (TE & GE)		
Low Speed Balance		
Transportation (Round Trip)		4 Days
Potential Rotor Straightening		TBD
LPA Rotor		TBD
Fineline Weld L-2 and L-3 wheels, Replace L-0 covers		
Transportation		4 Days
LPB Rotor		TBD
Fineline Weld L-2 and L-3 Wheels, Replace L-0 Covers		
Transportation (Round Trip)		4 Days
LPC Rotor		TBD
Fineline Weld L-3 wheels, Replace L-0 Covers		
Transportation (Round Trip)		4 Days
Reheat Shell (On Site)		1 Week
Machine Reheat Shell Diaphragm Fits to Restore Alignment (Plumb Fits)		
Valves		5 Days
Main Stop Valve - Clean & Inspect (Qty 4)		
Control Valve - Clean & Inspect (Qty 4)		5 Days
Reheat Diaphragms		25 Days
11th (old 8th) Stage Diaphragm. Major Repair (TE & GE)		
12th (old 9th) stage Diaphragm. Major Repair (TE & GE)		25 Days
Reheat Diaphragms		4 Weeks
Onsite Diaphragm Minor Repairs		



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Price Estimate

Pricing estimate calculated (in 2015 dollars) using the current discounted rates per Exhibit J – Summary of Commercial Elements found in the Turbine Generator Alliance Agreement between FirstEnergy Service Company and General Electric International Inc., Revision 1 dated 11/05/14.

Workscope	Price Estimate
On Site Services, Including Craft Labor	\$5,194,000
Note: Includes GE Field Engineers for outage preparation/planning, technical direction, generator testing, HIT skid support, MKVI support for valve stroking/calibration, balance support, startup support; APM supervision and labor; large toolkit, HIT skid, etc. for performing scope; Phased array UT testing of three LP rotors, trailers, consumables, etc. Removal of field is not included but can be performed at no additional charge if performed off critical path.	
On Site Services, No Craft Labor	\$1,094,000
Note: Includes GE Field Engineers for outage preparation/planning, technical direction, generator testing, HIT skid support, MKVI support for valve stroking/calibration, balance support, startup support; HIT skid & generator testing; Phased array UT testing of three LP rotors.	
Reheat Rotor	
Replace 8th stage buckets (TE & GE)	
Replace 9th stage buckets (TE & GE)	
Low Speed Balance (Balance Weights Not Included)	
Total	\$199,135
Transportation (Calculated at Cost + 15% per Alliance Agreement)	\$23,690
Potential Rotor Straightening	
Heat Lathe Process	\$200,000
Machine New Centerline	\$190,000
Weld Up Rotor and Machine New Centerline	\$330,000
Note: Prices and scope based on an estimate for a rotor with a mid-span runout of 35 mils.	
LPA Rotor	
Fineline Weld L-2 and L-3 wheels, Replace L-0 covers (Balance Weights Not Included)	\$1,650,000
Transportation (Calculated at Cost + 15% per Alliance Agreement)	\$56,235
LPB Rotor	
Fineline Weld L-2 and L-3 Wheels, Replace L-0 Covers (Balance Weights Not Included)	\$1,650,000
Transportation (Calculated at Cost + 15% per Alliance Agreement)	\$56,235

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Workscope	Price Estimate
LPC Rotor	
Fineline Weld L-3 wheels, Replace L-0 Covers (Balance Weights Not Included)	\$950,000
Transportation (Calculated at Cost + 15% per Alliance Agreement)	\$57,500
Reheat Shell (On Site)	
Machine Reheat Shell Diaphragm Fits to Restore Alignment (Plumb Fits)	\$130,000
Valves	
MSV - Clean & Inspect (Qty 4)	
CV - Clean & Inspect (Qty 4)	
Total	\$59,000
Reheat Diaphragms	
11th (old 8th) Stage Diaphragm. Major Repair (TE & GE)	
12th (old 9th) stage Diaphragm. Major Repair (TE & GE)	
Total (Transportation Not Included)	\$516,000
On Site Weld Repair - Diaphragms/Packing Case, Etc.	
Minor Repairs (8 Welders/shift, 2 Shift/day, 7 Days/Week, 3 Weeks)	\$1,300,000
Note: T&M Estimate	

Notes:

1. The above prices are in US Dollars, and do not include applicable sales, excise, value added, use or similar taxes.
2. The prices above are based on the Schedule herein, if the job is extended beyond this schedule due to, but not limited to, extra work or other delays, i.e., incorrect parts supplied by FE, unexpected component repairs, etc., FE will assume costs for all supervision, overhead, support facilities, tools, support labor, etc. for those days the job is extended beyond the planned completion date due to these delays.
3. If transportation is needed, GE will coordinate all transportation through FE's logistics vendor Ardmore Logistics, Ardmore will direct bill FE for all transportation. Additional transportation, if required shall be considered Extra Work. FE can make arrangements with one of their local vendors, otherwise, upon request; GE will make the necessary arrangements.
4. Additional services for overtime work, investigating or correcting problems uncovered by testing, standby time, safety or in-processing training required by FE are billable at the external commercial rates in effect at the time the work is performed.



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Outage Preparations for Consideration for a First Inspection after an HP Dense Pack Installation

The fleet experience regarding first inspections after a Dense Pack installation has not been formally consolidated. There are lessons learned; however, different units are often operated under different conditions/variable by customers. Findings and generic feedback on what is typical from GE Performance Engineers, who perform site inspections on steam turbines after Dense Pack installations, are noted below. If FE wants a more detailed look at their particular unit, a funded study can also be performed at current conditions.

Preliminary Recommendation

1. Consider Pre-Outage Intelligence (POI). Separate service to review turbine service records and plant/BOP performance to prepare for the outage.
2. Consider a Steam Path Audit (SPA) – both structural and thermal for detailed assessment of steam path during the outage with onsite recommendations.
3. Review dense pack design for unit specific potential issues.
4. For clearance controls with brush seals – prepare to replace Tip Spill Strips (TSSs) and packing rings.
5. For abraidable coating – potential for re-coating surfaces.
6. For positive pressure packing, may need repairs depending on service.
7. Depending on rubs/vibrations – may need new stage packing and N1-2 packing rings. (In general, spare sealing hardware such as tip spills and packing rings are advised for potential damage and future wear.)
8. Depending on FOD/SPI in unit history, may need minor repairs to first 2-3 stages of nozzles and buckets. (See POI above.)
9. Potential to re-coat buckets and nozzles depending on boiler work and past history of SPI/FOD, etc. (off site repair)
10. Assume LES/NDT and Field Engineer checks will be conducted on diaphragms and rotor (e.g., dishing checks, mag-particle, etc.).
11. Carefully inspect the MSI inlets. The Tri/Bi metallic rings have sometimes trapped particles and caused erosion into the stellite surfaces of the snout pipes. Stellite surfaces on pipes sometimes need to be refurbished.



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12. Most customers do not pull lower half shells for inspections. However, this could be a location of deceiving measured efficiency degradation, not to mention other performance losses.
13. Inspect the packing (VCP PP). This packing can become immobilized with particles or blue blush, etc. in some previous situations.
14. Inspect the Integral Cover Buckets (ICB's) carefully. If an ICB with a steep angle cover, there is an ECN regarding the inspection. GE has seen some issues at the cover to cover contact locations.
15. Inspection of Hi-Lo Tooth Packing. Depending on the vintage, the packing could be of an inserted tooth design, and older upgrades had molyascoloy material, which has been superseded, due to a combination of embrittlement and high cycle fatigue. GE PAC would generally prefer replacing that packing style with integral teeth packing of upgraded material. During inspection, pay particular attention to the N-2 area of the SFHP. Joint erosion and packing issues surround the skimmer.
16. Determine whether TIL-1404 (SPE and Cover Wear Experience) applies depending on vintage of designs.
17. Review old outage reports for information regarding deposits, SPE, humping of the shell, etc. These can help in understanding deterioration mechanisms and aggressiveness. In addition, valve outage reports can reveal SPE/FOD issues.

PAC recommends the review past outages, inspection reports, current detailed HP design features, and review of similar units if a more thorough assessment is desired. GE has inspected other Dense Pack upgrades; however, there are different generations with different sealing features and coatings, different turbine designs, different operating conditions and different damage mechanisms. Therefore, a more detailed assessment of this unit would be recommended and will take additional time. Note that non-steam path items such as snout rings, shells, fasteners should also be addressed.



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Division of Responsibilities

Distribution of responsibilities between GE and FE and additional assumptions and clarifications.

RESPONSIBILITIES	GE	FE
1. Personal safety equipment	X	<input type="checkbox"/>
2. Safety orientation for labor force	X	X
3. Normal maintenance tools needed to perform "Workscope" described herein	X	<input type="checkbox"/>
4. Special tools and equipment originally supplied with the unit	<input type="checkbox"/>	X
5. Expendable materials (rags, hones, joint and bolt compounds, solvents, etc.)	X	<input type="checkbox"/>
6. Acetylene and oxygen	<input type="checkbox"/>	X
7. Normal plant service required for maintenance such as light, heat, water, compressed air and electric power	<input type="checkbox"/>	X
8. Wash facilities	<input type="checkbox"/>	X
9. Sanitary facilities	X	<input type="checkbox"/>
10. Parking for GELL's work force	<input type="checkbox"/>	X
11. Office area and telephone for field engineers & crew foremen	X	X
12. First aid facility & fire protection	<input type="checkbox"/>	X
13. Trash containers & disposal of all materials used	<input type="checkbox"/>	X
14. Supplementary lighting	X	<input type="checkbox"/>
15. Labor and equipment to disassemble, reassemble and calibrate instrumentation	<input type="checkbox"/>	X
16. Electrical tests and necessary repairs on all electrical motors or power circuits	<input type="checkbox"/>	X
17. Labor to disconnect and reconnect wiring & conduit necessary for disassembly/reassembly	<input type="checkbox"/>	X
18. Plant electricians to disconnect, tag out and reconnect electrical apparatus	<input type="checkbox"/>	X
19. Electricians to assist GELL generator specialist	<input type="checkbox"/>	X
20. Isolate and tag out turbine-generator equipment	<input type="checkbox"/>	X
21. All turbine oil, greases and spare & renewal parts needed to complete "Workscope"	<input type="checkbox"/>	X
22. Component repair needed to complete "Workscope". Transportation to and from	X	X

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RESPONSIBILITIES		GE	FE
repair facility			
23. Receiving, off-loading and proper storage of all new and refurbished parts		<input type="checkbox"/>	X
24. Representative scheduled concurrent with GEL crews to facilitate location of parts and other outage activities		<input type="checkbox"/>	X
25. Operational personnel to perform all normal functions of T-G equipment (shutdown, start-up, drain and fill oil systems, etc.)		<input type="checkbox"/>	X
26. Protective coatings and heaters to maintain generator while disassembled		<input type="checkbox"/>	X
27. Load tested crane and certify cranes		<input type="checkbox"/>	X
28. Certified crane operator		X	<input type="checkbox"/>
29. Designated work and laydown areas accessible to crane and turbine		X	X
30. Material for protection of laydown surfaces		<input type="checkbox"/>	X
31. Rotor supports (Power Rollers) and cribbing material for equipment requiring laydown		<input type="checkbox"/>	X
32. Machine shop facilities, on-site machining and painting as required		<input type="checkbox"/>	X
33. Blast cleaning of all components necessary onsite		<input type="checkbox"/>	X
34. Non-destructive test (NDT) services(MT, UT, etc.) , for onsite work		<input type="checkbox"/>	X
35. Periodic electrical megger testing to monitor generator field condition during outage		<input type="checkbox"/>	X
36. All permits, licenses, governmental or public utility charges and inspection fees		X	X
37. UT Phased array inspection of LP rotors on site		X	<input type="checkbox"/>
38. Customer to provide Full Train Alignment, laser alignment and alignment support services and GE/APM labor will make the moves		<input type="checkbox"/>	X
39. Provide Induction bolt heating and hydraulic bolting equipment and service (Bolting Contractor)		<input type="checkbox"/>	X
40. All scaffolding and erection, adjustment, dismantling by contractor		<input type="checkbox"/>	X
41. Insulation contractor to remove, repair and re-install all lagging, blankets and insulation		<input type="checkbox"/>	X
42. Polishing of valve seats and valve gaskets contact areas		<input type="checkbox"/>	X
43. Inspection/Repair/Reconditioning of bearings, thrust bearings, oil deflectors, etc.		<input type="checkbox"/>	X
44. Cleaning of Turbine Lube Oil tubes and reconditioning of TGOP motors/pumps		<input type="checkbox"/>	X
45. RVI service		<input type="checkbox"/>	X



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Assumptions & Clarifications

1. Sufficient spare and renewal parts will be on hand at the beginning of the outage as to prevent any delays resulting from repair or procurement time. All replacement parts will be provided by FE.
2. All component repairs will be provided by GE and FE, and to be further discussed.
3. It is assumed that no hazardous material will be encountered in performing the workscope. Disposal of any hazardous or regulated material will be the responsibility of FE.
4. Start-up support includes the services of one (1) Field Engineer, one (1) Foreman, and two (2) Journeymen for four 12 hour shifts
5. In the case where lead is found to be either directly or indirectly involved in the work as reflected in this proposal and which warrants procedures necessary to adhere to occupational and safety guidelines as outlined by local, state, and/or federal guidelines, FE retains responsibility to reimburse GE for such work at cost plus 15% or subcontract the work to a third party at their discretion. Any additional exposure to direct or indirect costs to GE scope attributable to addressing lead contamination issues will be billed to the FE at time and material rates as reflected in this contract.
6. GE shall furnish FE a complete list of inspection results, including details of conditions found, corrective actions taken and unusual conditions observed, along with a list of parts expended during the inspection to include those recommended for the next inspection.
7. SAFETY: An "on-site" safety checklist will be utilized by GE as a minimum for conformance to safety while on FE's property. Additionally, GE will conform to FE's safety requirements for personal protective clothing and devices, such as safety glasses (side shields if required), hard hats, hand protection (gloves if required). All material and/or parts which become a permanent part of the unit after installation will be furnished by FE unless specifically specified as being furnished/supplied by GE in other parts of this quotation.
8. Engineering support for the startup activities, balance refinement (GE/Bently Balance Engineer), and Mark VI valve stroking/calibration (GE Controls Engineer) is included in the scope of this proposal and is limited to one week after unit is ready for turning gear. Engineering support for the startup will remain on site if requested, on a time and material basis, until successful full load operation is achieved.
9. GE and its workforce will utilize designated FE contractor personnel auto parking area.



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10. FE shall supply compressed gases such as oxygen, acetylene and argon, as required by GE's workforce for the execution of its work.
11. FE will be responsible for isolating all work areas from hazard (i.e., steam, electrical, and chemical) for the scope of GE Energy Service's work. FE will LOCKOUT-TAGOUT all systems associated with the GE workscope.
12. GE's firm price includes four (4) hours lapping per valve, additional lapping will be performed as extra work.
13. FE will provide all coupling alignment pins.
14. GE Energy Service's price includes drilling and tapping of broken bolts 1/2 inch diameter or less.
15. FE will provide all required bearing mandrills.
16. GE will provide shipping and insurance as needed for rotors to be repaired. GE will coordinate shipping other components to be repaired through FE's preferred shipping vendor. Blue contact checks of any horizontal joints, if required, will be considered extra work.
17. FE will provide overhead crane maintenance as required.
18. FE will provide special tooling as originally supplied with the turbine-generator set, including but not limited to generator skid pan, shoe shaft jacks, eyebrow, rotor lifting beam and slings, field rigging and protective covers, turbine shell and hood rigging, turbine rotor stands, electric bolt heaters.
19. FE will provide generator stator and exciter alignment shim packs.
20. GE shall provide labor and supervision to satisfy the exciter and generator lay-up and protection plan. FE will provide necessary monitoring equipment and air handlers.
21. For worksopes which include a Steam Path Audit
 - A. GE will provide timely access to steam path components to be evaluated by removing turbine shell(s) and rotor(s) such that the evaluation can proceed without delays.
 - B. GE will provide timely access to steam path components to be evaluated prior to reassembly of turbine shell(s) and rotor(s) such that the closure evaluation (if performed) can proceed without delays.
 - C. GE will lay down diaphragms trailing edge "up" to avoid re-handling.



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D. If necessary, GE will provide personnel and tools to move components.

E. All parts to be viewed prior to cleaning and NDT.

22. FE to provide FME devices.

Terms and Conditions

This commercial response is based upon the Turbine Generator Alliance Agreement between FirstEnergy Service Company and General Electric International Inc., Revision 1 dated 11/05/14 and Master Agreement Terms and Conditions between FirstEnergy Service Company, an Ohio Corporation, FirstEnergy Generation Corp., Allegheny Energy Supply Company, LLC, Monongahela Power Company and General Electric International Inc., a Delaware Corporation to provide Equipment and/or Services for FirstEnergy Fossil and Nuclear Power Plants, Revision 1 dated 05/14/14.



GENERAL ELECTRIC ENERGY SERVICES
4930 BUTTERMILK HOLLOW RD
WEST MIFFLIN PA 15122

Your number with us
140009960

Please deliver to:
Bruce Mansfield Plant
Storeroom
128 FERRY HILL ROAD
SHIPPINGPORT PA 15077

Purchase Order

PO number/date
45484172 / 11/13/2015
Contact person/Telephone
Lori Bates/330-436-1558
Contact person Email
batesl@firstenergycorp.com

Our fax number
330-255-1098

Delivery date:
03/19/2016

Freight Charges & FOB Terms: Prepay & Bill, FOB destination
Terms of payt.: within 30 days Due net Currency USD

"Purchaser" is FirstEnergy Service Company on its own behalf and on behalf of its affiliates. The ship-to address may name either the Purchaser as named above and/or a subsidiary or affiliate company of the Purchaser. If more than one company is identified as the purchaser, the liability of each company named shall be several and not joint and shall be limited to such company's interest as identified therein.

SUPPLIER CONTACT INFORMATION

Name: Rob Alexander
Phone: 614-269-8100
Email: robert.alexander2@ge.com

FIRSTENERGY SUPPLY CHAIN CONTACT

Buyer: Lori Bates
Phone: 330-436-1558
Fax: 330-255-1098
Email: batesl@firstenergycorp.com

FIRSTENERGY TECHNICAL CONTACT

Name: Tom Cowher
Phone: 724-643-2452
Email: cowhert@firstenergycorp.com

PROPOSAL/QUOTE

QUAL R37H0438

DATE

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EXHIBIT

Appendix000644

EXHIBIT NO. GL17 RECEIVED ☒ REJECTED ☐
CASE NO. LA-143303 CASE NAME FirstEnergy
NO. OF PAGES 101 DATE 12/2/16 REPORTER JAO

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WEST MIFFLIN PA 15122

PO number/date
45484172 / 11/13/2015

Reference GE Proposal 1033902 R1 dated November 5, 2015

BRIEF DESCRIPTION
Bruce Mansfield Plant
Unit #1 Spring 2016 Outage (M116)
Major Turbine Inspection/Steam Path Audit

PERIOD OF PERFORMANCE
March 19, 2016 thru May, 2016

Invoicing

Questions about invoices or payments or electronic payment/presentment may be directed to the Accounts Payable help desk at (814)539-3200.

All invoices rendered under this purchase order shall be sent directly to the primary contact person at the location for which the below described services are performed.

The invoice must include the following:

- Purchase order/change order number
- Line item number
- Timesheets
- Receipts for reimbursable expenses

Mail or email a copy of the invoice to:

FirstEnergy
Bruce Mansfield Plant
Attn: Tom Cowher, A-BM
128 Ferry Hill Road
Shippingport, PA 15077

Tax exempt purchase. No taxes will be paid.

Progress Payments
5% - Six (6) Weeks prior to mobilization
20% - Mobilization
30% - Receipt of repaired IP rotor on site
35% - Unit ready for Turning Gear
10% - Issuance of Final Report

Item	FE Material No.	Unit	Price per unit	Net value
	Order qty.			

00001

GE shall provide Turbine-Generator Outage Services for Bruce Mansfield Unit 1 during the 2016 scheduled outage per GE Proposal 1033902 R0, dated October

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22, 2015.
The outage start date is March 19, 2016. The outage duration is 56 days.
This is a 2016 project, no invoices will be honored in 2015.

Progress Payments
5% - Six (6) Weeks prior to mobilization
20% - Mobilization
30% - Receipt of repaired IP rotor on site
35% - Unit ready for Turning Gear
10% - Issuance of Final Report

Item	FE Material No. Order qty.	Unit	Price per unit	Net value
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00002

GE shall perform an Opening Full Structural and Thermal Steam Path Audit for Bruce Mansfield Unit 1 HP Turbine Section during the 2016 scheduled outage per GE Proposal 1033902 R1 - 11-05-15, Attachment Proposal 1037841 dated October 22, 2015.
The outage start date is March 19, 2016. The outage duration is 56 days.
Payment: 100% upon mobilization

Total order value	USD	3,907,678.00
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FirstEnergy Instructions to Outside Carriers

When delivering/picking-up material at FirstEnergy (FE) locations, all drivers are required to communicate with an FE employee or FE authorized representative. The FE employee or FE authorized representative will make the determination whether a job briefing with the driver is required.

Driver is required to engage the parking brake, chock the wheels and/or use dock locks, where available.

Driver is required to open the truck or trailer doors/remove gates and remove rear load bar before loading or unloading. FE employee or FE authorized representative will assist driver in backing, if needed.

To avoid inadvertent vehicle operation, the driver should remain outside the vehicle in a safe location where he/she is visible to the person performing the unloading/loading.

It is the responsibility of the carrier/driver to ensure their vehicle is in good mechanical repair. In the event the carrier's vehicle/equipment develops a fuel or oil leak, it must be identified and contained immediately by a qualified employee.

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Occupational Safety and Health Administration (OSHA)

Requirements for Vehicles

No vehicular equipment having an obstructed view to the rear may be operated on off-highway jobsites where any employee is exposed to the hazards created by the moving vehicle, unless the vehicle has a reverse signal alarm audible above the surrounding noise level, or the vehicle is backed up only when a designated employee signals that it is safe to do so.

Additional Transportation Requirements

Please be advised that oversized loads (weight, length etc) should be delivered on flatbed trucks and not box trucks. We will not accept any shipments that require the load to be dragged or pushed from a box truck. Loads may be rejected at the FirstEnergy warehouse if deemed unsafe to unload. Please contact Purchaser for guidance.

OSHA Compliance and Safety

1. The Contractor represents and warrants that all articles, including but not limited to materials, equipment, protective clothing, scaffolding, walkways, ladders, etc. furnished, meet or exceed all specifications promulgate for safety and health standards under the Occupational Safety and Health Act (OSHA) of 1970 (29 U.S.C. 691 et. seq. 1970) and all regulations in effect as of the date of this Contract. The Contractor agrees that all labor furnished as part of this Contract is performed in accordance with all applicable OSHA requirements and all other applicable local, state, and federal regulations.

2. The Purchaser has established designated areas for contaminants that may include, depending on the location at which work is to be performed, but are not limited to inorganic arsenic, lead, asbestos, hydrogen sulfide and sulfur dioxide. Exposure to any of these contaminants may be above certain OSHA limits when working in any of these designated areas.

3. The Contractor shall be responsible for the interpretation and compliance with all applicable OSHA regulations including, but not limited to the regulations related to the contaminants.

4. OSHA compliance shall include, but not be limited to, the following:

a. Conducting personal sampling if required by OSHA regulations.

1.) If personal sampling is required, the Contractor shall inform Purchaser, in writing, of the personnel and/or Subcontractor that will be performing the sample collection and/or analysis.

2.) Purchaser reserves the right to reject all parties involved with the sample collection and/or analysis.

3.) The Contractor shall supply Purchaser with the results of all personal monitoring samples collected on Purchaser's property.

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b. Supplying personal protective equipment and other related equipment if required by OSHA regulations.

5. The Contractor shall comply with all requirements of OSHA CFR 1910.1200, and any applicable state Right To Know Acts, including but not limited to the labeling of containers, proper handling of applicable materials, proper training and protection of employees and others, and the securing and implementing of Material Safety Data Sheets.

6. The Purchaser has determined that in any enclosed area that transports circulating water, there is a potential for the existence of common pathogenic organisms. The Contractor shall be responsible for the proper protection of its employees and others in relation to Work performed in these areas.

7. For Work performed at the Purchaser's D. Bruce Mansfield Plant in the event of any emergency situation, specifically an emergency condition at the FirstEnergy Beaver Valley Power Station, it may become necessary to notify and/or possibly shelter or evacuate all onsite personnel. The Purchaser has developed The Bruce Mansfield Plant Emergency Preparedness Plan for emergency situations. The Contractor shall adhere to and participate in the plan if an emergency situation should occur.

8. The contractor is responsible for compliance with, and shall comply with, the various local and state health and safety codes, regulations, and ordinances of the state and locality where the work is to be performed.

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Work Performed

All work shall be performed in accordance with the following:

Turbine Generator Alliance Agreement between FirstEnergy Service Company and General Electric International Inc., Revision 1 dated 11/05/14 and Master Agreement Terms and Conditions between FirstEnergy Service Company, an Ohio Corporation, FirstEnergy Generation Corp., Allegheny Energy Supply Company, LLC, Monongahela Power Company and General Electric International Inc., a Delaware Corporation to provide Equipment and/or Services for FirstEnergy Fossil and Nuclear Power Plants, Revision 1 dated 05/14/14.

DELIVERY OF SUSPECT/COUNTERFEIT GOODS

Supplier is hereby notified that the delivery of suspect or counterfeit goods is of special concern to Purchaser. If any goods specified in the Purchase Order are described using a part or model number, a product description, and/or an industry standard, the Supplier shall assure the goods supplied meet all requirements of the latest version of the applicable manufacturer data sheet, product description, and/or industry standard unless otherwise specified. If the Supplier is not the manufacturer of the goods, the Supplier shall assure that all goods supplied under the Purchase Order shall be: (a) made by the original manufacturer; and (b) meet the applicable manufacturer data sheet, product description or industry standard. Should the Supplier desire to supply alternate goods that may not meet these requirements, the Supplier shall notify the Purchaser of any such exceptions and receive the Purchaser's written approval prior to shipment of the alternate goods to the Purchaser. If the Supplier does not receive the Purchaser's written approval to ship alternate goods and ships such goods to the Purchaser, it will be considered a material breach of the Agreement and any limitations on damages or liability shall not apply to the Supplier.

In addition, if suspect or counterfeit goods are furnished under this Purchase Order or are found in any of the goods delivered hereunder, such goods will be dispositioned by the Purchaser and/or the original manufacturer, and may be returned to the Supplier in accordance with the warranty provisions applicable to the Purchase Order. The Supplier shall promptly replace such suspect or counterfeit goods with goods meeting the requirements of the Purchase Order. If the Supplier knowingly supplied suspect or counterfeit goods, the Supplier shall be liable for all reasonable costs incurred by the Purchaser for the removal, replacement and reinstallation of said goods in accordance with the warranty provisions applicable to the Purchase Order.

Veterans Rule: "This contractor and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a). This regulation prohibits discrimination against qualified protected veterans, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans."

Disability Rule: "This contractor and subcontractor shall abide by the requirements of 41 CFR 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability, and requires

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PO number/date
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affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities."

FIRSTENERGY FOSSIL GENERATION CONTRACTOR SUBSTANCE ABUSE PROGRAM - Revised 04-22-2013

1. PURPOSE

FirstEnergy is committed to providing a safe workplace and maintaining a work environment that is free from the effects of alcohol and drug abuse.

2. SCOPE

Unless specifically exempted by this program by FirstEnergy, all contractors shall be covered by this program.

CONTRACTORS EXEMPTED FROM THIS PROGRAM

-Contracted Drivers
Drivers whose sole purpose is to drive Commercial Motor Vehicles on FirstEnergy property, will be expected to comply with all applicable Department of Transportation (DOT), Federal Motor Carrier Safety Administration (FMCSA) and Commercial Drivers License (CDL) drug and alcohol testing requirements.

-Contracted Credentialed Mariners
Contract workers that maintain US Coast Guard/ Maritime Credential will be expected to comply with all applicable Department of Transportation (DOT) US Coast Guard drug and alcohol requirements.

-Vendors, Deliveries and Specialty Contractors
These terms generally refer to a specialty contractor having fewer than 5 employees on-site for duration of 48 hours or less. Some examples include: vending machine workers, floor mat exchange workers, copy repairmen and other specialty services.

-Visitors
Visitors are not covered by this program provided they perform no on-site work.

3. PROGRAM DETAILS

Contractors performing work at FirstEnergy Fossil Generation Facilities shall be required to administer a mandatory substance abuse program for all employees, whether direct hire or subcontracted. FirstEnergy Fossil Generation recognizes that some Contractor's employees are covered by a Federally mandated program and already participate in a testing program. However, for those contract employees not covered by a Federally mandated program (eg., DOT-FMCSA; DOT-Maritime, etc.) must participate in a program that includes the following minimum criteria, as described in more details below, in order to be considered approved:

- Pre-employment testing
- Random Testing (minimum 20% of participating workforce per month)
- Reasonable cause / suspicion testing

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- Post Incident testing
- Drug and alcohol testing (see Testing Procedures for acceptable panels and levels)

The illegal manufacturing, distribution, dispensation, possession, or use of "prohibited substances which include illegal drugs (including controlled substances, look-alike drugs and designer drugs)" when working for a Contractor under a Purchase Order with FirstEnergy Fossil Generation is prohibited and will result in the contractor employee's immediate removal from FirstEnergy Fossil Generation Facilities.

The unauthorized possession or use of alcohol when working at a FirstEnergy Fossil Generation is prohibited and will result in the immediate removal from FirstEnergy Fossil Generation Facilities.

It shall be Contractor's sole responsibility to have their employees and all subcontracted employees report to Work in a condition to properly perform their duties (ie, Fit-for-Duty). Any off-duty use of prohibited substances, which adversely affects an employee's job performance, whose job performance indicates that he or she is unfit for duty, shall be sent for "reasonable cause / suspicion testing" and will not be permitted to work until an investigation into the cause has determined the employee to be fit for duty. The Contractor will require a medical examination by its doctor, including recognized diagnostic tests as part of their investigation. If the use of unauthorized drugs or alcohol is substantiated, the contractor's employee will not return to work on FirstEnergy Fossil Generation Facilities.

Contractor's employees who are undergoing medical treatment with a prescription drug or over-the-counter substance which has the potential to affect performance must report this treatment to Contractor. The use of such substances as part of a prescribed medical treatment program is not grounds for immediate removal from FirstEnergy Fossil Generation Facilities. Contractor shall comply with the FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specification, and otherwise be responsible for the safety of employees and others who may be affected by employee's performance.

Prohibited substances and paraphernalia discovered through site security procedures may be turned over to law enforcement authorities. Contractor is responsible for notifying employees that security inspections may include, but not be limited to, any vehicle, toolbox, or lunch box inspection.

Each employee must notify his or her employer of any criminal drug statute conviction for a violation occurring while on the job or on FirstEnergy's property no later than one (1) business day after such conviction.

Contractor shall have their on-site supervision knowledgeable of and fully capable of enforcing this Specification and are responsible to ensure all employees are knowledgeable and aware of the FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specification.

4. THIRD PARTY ADMINISTRATOR

An independent THIRD PARTY ADMINISTRATOR (TPA) "Mobile Medical Corporation (MMC)" has been

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selected to coordinate administration of the program between the CONTRACTORS and the PURCHASER (FE). For contractors who do not have current tests or a reciprocal policy, the TPA will coordinate with the Contractor for specimen collections at the PURCHASER'S locations or at established testing facilities as required.

All CONTRACTORS, prior to mobilizing at FirstEnergy Fossil Generation facilities, must contact the TPA and provide them with their company/consortium substance abuse policy for review. If the policy meets FE Substance abuse compliance specifications the contractor / consortium will provide current test records of employees to be added to the TPA/FE's database. Eligible tests will act as a valid pre-employment/entrance for a period of one (1) year from test date. All contractor employees except those participating in a Federally mandated substance abuse testing program, regardless of the substance abuse policy, will be added to the random testing calculations.

TPA Scope of Work:

- 1) Administer policy test types and random selections.
- 2) Collect and document results from an independent Substance Abuse Mental Health Services Administration (SAMHSA) certified laboratory
- 3) Consolidate results including non negative and provide statistics to the Construction Safety Representative.
- 4) Provide for the Medical Review Officer (MRO) services as described.
- 5) Provide chain of custody forms and collection supplies for all Power Stations in the event they are needed for any medical transport from the Power Stations

5. TESTING FOR PROHIBITED SUBSTANCES AND/OR ALCOHOL

Contractor's employees shall provide evidence of being drug and alcohol free PRIOR to performing ANY Work at a FirstEnergy Fossil Generation Facility. Contractor shall provide the negative results of every Contractor employee to TPA and have documentation of this verification readily available for review upon request. Note: A visual review of an approved substance abuse card is not an acceptable verification method. .

Contractor's Employees desiring to Work at FirstEnergy Fossil Generation Facilities shall be required to be tested for illegal use of controlled substances under the following conditions:

-Pre-employment Testing: Evidence shall be provided of employees being drug free prior to starting Work on FirstEnergy Fossil Generation property. When participating in an acceptable annual screening program, approved by TPA, Contractor must certify the required negative test results as a condition of employment for each employee by providing proof that the employee has tested negatively within the last twelve (12) months.

-Random Testing: Contractors who will be on site shall have random testing of their employees. The number of employees randomly tested shall be determined by FE and the TPA at a minimum of 20% per month of the participating work force beginning with the first day Contractor is on FirstEnergy Fossil Generation property.

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-When calculating for a random test, the work force participants shall include all current employees. An employee shall be considered as testing positive in the event that the employee fails:

- To appear or remain at site
- To provide urine specimen when required
- To permit directly observed or monitored collection
- To take a second test as directed
- To provide sufficient urine (with no medical explanation)
- To undergo medical evaluation
- To cooperate with testing process in any way

The PURCHASER'S TPA will make the random selections via a computer generated selection process. The Random Testing will be conducted without prior notice and employee(s) shall be notified immediately prior to testing but otherwise shall not receive any other advanced notice of random testing.

Any employee testing positive or refusing testing shall be disciplined in accordance with the Enforcement section of this program. Contractor Removal Form (Form X-3930) shall be used to notify FirstEnergy Fossil Generation of the discipline.

-Reasonable Cause / Suspicion Testing: A test may be administered in the event a trained supervisor has reasonable cause to believe that an employee has reported to work under the influence, or is or has been under the influence while on the job; or has violated this drug policy.

A contract employee who refused to submit to a "Reasonable Cause/ Suspicion" drug or alcohol examination is in violation of this specification and will be immediately removed from FirstEnergy Fossil Generation Facilities. If a contract employee becomes ill prior to the tests and wishes to go home, the contract employee must take the test or it will be considered a refusal.

-Post Incident Testing: If a contract employee damages property or injures themselves or other(s), the worker is subject to post incident testing. Breath alcohol test shall be included with a post incident test. Costs of post incident tests are the responsibility of the contractor. Post-incident testing shall be performed immediately following the incident.

6. TESTING PROCEDURE

Acceptable substance abuse testing programs shall be conducted within established guidelines developed by the United States Department of Health and Human Services Scientific and Technical Guidelines. The primary testing method is urinalysis with Gas Chromatography/Mass Spectrometry (GC/MS) confirmation by a SAMSHA certified laboratory. Programs and tests that are determined to be equivalent to the testing requirements may be used following review and acceptance by TPA. Acceptable tests shall be 11-panel with expanded opiates and amphetamines (11P-EOA) and have minimum cut-off limits as established in the chart below.

Rapid/ Instant Testing, must be approved by FE or TPA, and should be utilized in emergency situations only. The contractor shall ensure that test includes appropriate measures to identify potential adulterants and all non-negatives will be sent to a SAMSHA certified laboratory for GC/MS

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confirmation.

All confirmed non-negative laboratory results will be reviewed by the Medical Review Officer (MRO) who is a licensed physician that has knowledge of substance abuse disorders. The MRO must be certified by either the American Association of Medical Review Officers (AAMRO) or the American College of Occupational and Environmental Medicine (ACOEM). The MRO shall:

- a. Review and verify a laboratory positive test result.
- b. Contact the individual within 24 hours to discuss the reasons why their test

result is positive (if contact is not made following three(3) days, a 'non-contact positive' will be declared.

- c. Review the individual's medical record as provided by or at the arrangement of
- d. Confirm the laboratory result.

e. Notify the Third Party Administrator (TPA) of all confirmations (negative /positive).
All records of test reviewed by the MRO and supporting documentation will be forwarded to and maintained by the TPA.

In the case of urine testing, only those specimens which show positive results on both the initial screening and the confirmatory test shall be reported as positive, pending MRO review and verification. The completed non-Federal chain of custody form shall accompany any positive report, and copies of analytical reports shall be available to the employee.

Samples shall be properly stored at all times. All samples reported as positive will be stored frozen for at least 365 days. All handling and transportation of each specimen will be properly documented through strict chain of custody procedures.

NOTE: Employees who are used exclusively as Commercial Motor Vehicle (CMV) drivers and maintain a Commercial Drivers License (CDL) shall comply with DOT FMCSA testing requirements.

Drug Name	Initial Screening Cut-Off Limit	Confirmation Cut-Off Limit
AMPHETAMINES	500 NG/ML	
-AMPHETAMINE	250 NG/ML	
-METHAMPHETAMINE	250 NG/ML	
-MDMA	250 NG/ML	
-MDA	250 NG/ML	
-MDEA	250 NG/ML	
BENZODIAZEPINES	300 NG/ML	300 NG/ML
BARBITURATES	300 NG/ML	300 NG/ML
COCAINE METABOLITE	150 NG/ML	100 NG/ML
OPIATES	300 NG/ML	
-CODEINE	300 NG/ML	
-MORPHINE	300 NG/ML	
-HYDROCODONE	300 NG/ML	
-HYDROMORPHONE	300 NG/ML	

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6-MAM (Monoacetylmorphine) 10 NG/ML 10 NG/ML

OXYCODONE 100 NG/ML 100 NG/ML
PHENCYCLIDINE 25 NG/ML 25 NG/ML
MARIJUANA METABOLITE 50 NG/ML 15 NG/ML
METHADONE 300 NG/ML 300 NG/ML
PROPOXYPHENE 300 NG/ML 300 NG/ML

Alcohol (Breath) 0.04% 0.04%

NOTE: Opiate screening/ confirmations levels can vary depending on SAMHSA
NOTE: Medicines purchased in a foreign country may cause a positive drug
test.

NOTE: An alcohol result at or greater than 0.02, but less than 0.04 will
result in 24-hour continuous off from work.

7. CONFIDENTIALITY

All results will be reported to the employee. Results can be accessed by
contractor's Designated Representative for whom the employee is working.

Protecting the confidentiality of individuals is a primary interest of FE,
contractors, and labor. Therefore, there is a single entity contracted,
through the TPA, to provide Medical Review Officer (MRO) services for the
FirstEnergy Fossil Generation Contractor Substance Abuse Compliance
Specification. Only the MRO has access to an individual's medical records.
The MRO, third party administrator (Mobile Medical Corporation), individual
contractor Designated Representative (DR) and the FirstEnergy Designated
Representative have access to an individual's laboratory drug screening
results. No information about test results, substances, levels of
screening, or any other specific information will be shared with any party
other than listed in the preceding statement.

The following procedures and guidelines regarding confidentiality will be
strictly observed:

(1) All test results will be considered medical records and held
confidential to the extent permitted by law.

(2) All actions taken in connection with the Policy will remain
confidential.

(3) Only the MRO will have detailed information concerning an individual's
laboratory drug screening.

(4) Only the MRO or the TPA may disclose whether an individual is current or
not current with the Policy.

(5) Medical personnel, the contractor, its supervisors, or any other
personnel will not disclose any information regarding the screening of an
individual.

(6) Information may be divulged for grievances, arbitration, and/or
litigation with respect to these matters to the extent permitted by law.

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8. CONTRACTOR REQUIREMENTS

Contractor shall ensure that their Substance Abuse Program meets or exceeds the FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specifications by submitting a copy of their policy along with a FE Policy Review checklist to the TPA who will review for compliance with FE policy.

It shall be the Contractor's sole responsibility to monitor their employees' performance, to maintain they remain current while working at FE and to administer any discipline. The contractor will inform employee in cases where they may not, temporarily or permanently, perform Work for FirstEnergy Fossil Generation Facilities. Contractor shall notify union representation of any individual who has been removed from a FirstEnergy Fossil Generation facility, and provide written documentation to the FirstEnergy Contractor Safety Representative that this notification has taken place. Contractor Removal Report (Form X- 3930).

Contractor shall provide completion documentation to the employee, and/or their Union Representative and forwarded through Contractor/Employer to FirstEnergy's Contractor Safety Representative when the employee desires to return to FirstEnergy's Fossil Generation facilities. Contractor shall maintain a record of all test results in accordance with all applicable state laws, rules and regulations.

9. DISCIPLINARY ACTION

Any violation of the policy warrants the following disciplinary action:

1. Removal from the work site, and subject to the exception below, banned from working at any FirstEnergy Fossil Generation Facilities, for a minimum period of one (1) year, from the date of violation.
2. To be eligible to return to work at a FE location the employee must participate in a Substance Abuse Education/Treatment Program that includes a clinical assessment, a prescribed treatment plan a verified negative return-to-duty test result and follow-up testing (See 13. Return to work requirements).

10. DOCUMENTATION

The following Forms are to be used in administering the FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specifications: (All forms are available from the TPA)

- FE Policy Review Checklist
- FE Company Registration
- FE Contractor Removal Report (Form X-3930)
- FE SAP Reinstatement
- FE Reasonable Suspicion Checklist

11. RETURN TO WORK REQUIREMENTS

To be eligible to return to work at a FE location, the employee must participate in a Substance Abuse Education/Treatment Program that includes a clinical assessment, a prescribed treatment plan, a verified negative return-to-duty test result and follow up testing. The employee will be

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subject to follow-up testing as recommended by the Substance Abuse Professional (SAP) as a condition of further employment.

The SAP will provide completion documentation to the employee, and/or their Union Representative and forwarded through Contractor/Employer to FirstEnergy's Contractor Safety Representative when the employee desires to return to FirstEnergy's Fossil Generation facilities. FirstEnergy Contractor Safety Representative along with First Energy's Director, Construction shall review the return of any contractor employee returning to FirstEnergy's Fossil Generation facilities, prior to return.

12.COST

When performing firm price and/or lump sum work, the cost to administer the program, including testing, is to be borne by the Contractor.

When performing cost plus work, all costs for administering the program including testing is to be borne by the Contractor with the following exceptions:

- Random testing shall be reimbursable.
- Reasonable cause / suspicion and post incident testing requested by Purchaser shall be reimbursed if the results are negative.

13.SUBSTANCE ABUSE PROGRAM CHANGES

The Purchaser reserves the right to amend or make written changes to this compliance specification.

14.DEFINITIONS

a) Accident - an unplanned or unintended event that occurs on company property, during the conduct of company's business, or during scheduled work hours, or which involves company supplied motor vehicles that are used in conducting business, or is within the scope of employment, and which results in any of the seven (7) situations:

- 1) A fatality of anyone involved in the accident;
- 2) Bodily injury to the employee and/or another person that requires off-site medical attention away from the company's designated place of employment/worksites;
- 3) Any accident in which the driver is cited and there is disabling damage to the vehicle(s) requiring tow-away;
- 4) Any accident in which the driver is cited and off-site medical attention is required;
- 5) Vehicular damage in apparent excess of \$1000.00;
- 6) Non-vehicular damage to any company property (i.e. - tools, materials, etc.) in apparent excess of \$750.00;
- 7) Any event resulting in injury to a person or property to which an employee, or contractor/contractor's employees, contributed as a direct or indirect cause.

b) Adulterated Specimen - A urine screening, which has been substituted or

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tampered with to cover the true results.

- c) Collection Facility/Site - Approved location where participants can provide a specimen for testing.
- d) Computer Generated Selection Testing (CGST) - Third party administrator will randomly select participants to be tested through a computer generated selection process.
- e) CGST Testing Pool - All participating members (labor and management) will be subject to CGST selection.
- f) Designated Representatives (DR's) - Are contract persons that receive communications and test results from the TPA and is authorized to take immediate actions to "remove" employees from duty. These individuals work directly with the program's Third Party Administrator (TPA). All DR's are to keep privileged substance abuse information confidential.
- g) Dilute Specimen - A dilute specimen with a valid, negative laboratory result shall be treated as a negative program test. A dilute specimen with a MRO confirmed positive laboratory result, shall be treated as a positive program test. Recollection of a dilute specimen shall be deemed necessary when both the specific gravity and Creatinine concentrations are abnormally low, (specific gravity < 1.003 and Creatinine < 20 mg/dl). Such a recollection may not be collected under direct observation, unless there is another basis for use of direct observation, eg., dilute specimens where the creatinine is 2-5 mg/dL.
- h) Eligible - Database system status referring to an employee who is validated as current in the FE database or has a current drug screen under an approved reciprocal program.
- i) Employee - Individuals, who perform work for (Company Name), including, but not limited to, management, supervision, engineering, craft workers and clerical personnel.
- j) Employee Assistance Program / Member Assistance Program (EAP/MAP) An EAP/MAP is intended to prevent or address substance abuse problems and may assist employees/union members and their eligible family members with interpersonal conflicts, family problems, workplace crises, eldercare stresses, psychological problems and financial management. The EAP/MAP is able to provide voluntary and confidential counseling services.
- k) Gas Chromatography/Mass Spectrometry (GC/MS) - A state-of-the-art test used to confirm the presence and amount of an identified drug/metabolite in a urine specimen.
- l) Incident - An event, which has all the attributes of an accident, except that no harm was caused to person or property.
- m) Ineligible - Database system status referring to an employee who is not validated as having a current drug test. (An ineligible employee should contact the TPA or his/her Company Designated Representative.)
- n) Medical Review Officer (MRO) - A licensed physician, qualified by either AAMRO or MROCF, who is responsible for receiving laboratory results and

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determining if there is a medical explanation for the presence of drugs/metabolites in the donor's urine. This physician must have knowledge of substance use disorders and appropriate medical training to interpret an individual's confirmed positive test result, together with his/her medical history and any other relevant medical information.

- o) Negative test result - A drug test result acceptable for employment and/or an alcohol test result at or below 0.02%.
- p) Positive Test result - A test result, which exceeds the cut-off limits, within the criteria indicated in Section 6 of this specification and as verified by the program's MRO.. Or, a test that has been tampered with in any way (adulterated specimen). Lastly, a refusal (shy bladder, substituted, etc., as verified by a MRO, will be treated as a positive test result. Medicines prescribed or purchased in a foreign country may cause a positive drug test.
- q) Prohibited Substances - Prohibited substances include illegal drugs (including controlled substances, look-alike drugs and designer drugs) and alcoholic beverages in the possession of or being used by an employee on the job.
- r) Reasonable Suspicion For Cause - Reasonable suspicion shall be defined as, but not limited to, excessive absenteeism or tardiness, slurred speech, alcohol smell, and erratic behavior such as noticeable imbalance, incoherence and disorientation.
- s) Return-to-Work Test - Testing required to reinstate eligibility after a positive test and completion of a prescribed treatment program.
- t) Substance Abuse Mental Health Services Administration (SAMHSA) - The Substance Abuse and Mental Health Services Administration (SAMHSA), an operating division of the Health and Human Services Department (HHS), was established in 1992 by the Alcohol, Drug Abuse, and Mental Health Administration Reorganization Act (Pub. L. No. 102-321). SAMHSA provides national leadership in the prevention and treatment of addictive and mental disorders, through programs and services for individuals who suffer from these disorders.
- u) Substance Abuse Professional (SAP) - A qualified professional includes: licensed physicians, licensed/certified psychologists, social workers, employee assistance professionals and certified addiction counselors with knowledge of and clinical experience in the diagnosis and treatment of alcohol/drug-related disorders.
- v) Synthetic / Designer Drugs - Synthetic substances that mimic marijuana, cocaine and other illegal drugs that can cause seizures, hallucinations and death. Many states have banned the sale, use or possession of these substances.
- w) Third Party Administrator (TPA) - An independent entity that administers FE's collections, analysis, reporting, maintenance of records and all confidential information for each participating group.
- x) Under the Influence of a Prohibited Substance - "Under the influence of a

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prohibited substance" as used by this policy, means the following:

1) Alcohol - Blood or Breath alcohol level of ≥ 0.04 or as determined by the owner.

2) Other Prohibited Specimen - Positive results based on the following thresholds for urinalysis

a) Marijuana 50 ng/ml initial screen and
15 ng/ml confirmatory test

b) Cocaine - 150 ng/ml initial screen and
(Metabolite) 100 ng/ml confirmatory test

c) Opiates 300 ng/ml initial screen and
300 ng/ml confirmatory test
6-Acetylmorphine 10 ng/ml initial screen and
10 ng/ml confirmatory test

d) Phencyclidine 25 ng/ml initial screen and
25 ng/ml confirmatory test

e) Amphetamines 500 ng/ml initial screen and
250 ng/ml confirmatory test
Ecstasy 500 ng/ml initial screen and
250 ng/ml confirmatory test

f) Barbiturates 300 ng/ml initial screen and
300 ng/ml confirmatory test

g) Benzodiazepines 300 ng/ml initial screen and
300 ng/ml confirmatory test

h) Methadone 300 ng/ml initial screen and
300 ng/ml confirmatory test

i) Oxycodone 100 ng/ml initial screen and
100 ng/ml confirmatory test

j) Propoxyphene 300 ng/ml initial screen and
300 ng/ml confirmatory test

FirstEnergy Fossil Generation Contractor Safety Requirement s- Revised
06-23-2014

Introduction:

FirstEnergy Fossil Generation aims to foster a safe and secure environment for all employees, contractors and visitors. To that end, safety systems must be in place and that work practices must support our vision for safety as a core value. Safety leadership, commitment and involvement by all personnel will drive the pursuit of an injury-free culture.

These safety requirements shall be considered minimum standards applied to all construction work performed at FirstEnergy Fossil Generation Facilities. All Contractors are required to ensure that they and their employees,

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sub-contractors, suppliers, vendors, and visitors, comply with the provisions of this manual. THE PROVISIONS OF THESE REQUIREMENTS SHALL BE STRICTLY ENFORCED.

These Contractor safety requirements are a supplementary document to all governmental rules, codes and regulations, and does not negate, abrogate, alter or otherwise change any provisions of those rules and regulations. It is understood that the ultimate responsibility for providing a safe worksite is the responsibility of the Contractor.

Contractors are reminded that FirstEnergy maintains its ownership rights over all safety manuals and training documents, etc. In the event the contractor is investigated by OSHA or any other tribunal or agency, Contractor may not turn over any FirstEnergy property, including documents or manuals, unless authorized in writing by FirstEnergy.

1.0 GENERAL

Purchaser acknowledges and agrees that Contractor may have portions of the Work accomplished by Subcontractors pursuant to written Subcontracts between Contractor and such Subcontractors. Contractor shall maintain all Subcontracts at all times to be consistent with the terms or provisions of this document. Contractor shall be fully responsible to Purchaser for the acts and omissions of Subcontractors and of persons directly or indirectly employed by them, to the same extent as it is for the acts or omissions of persons directly employed by Contractor. All Subcontractors and personnel of Subcontractors are to be instructed in the terms and requirements of Purchaser approved safety and regulations and shall be expected to comply with such regulations.

Definitions:

Supervision: is defined as personnel with responsibility for making site Work assignments and overall responsibility for the Work including but not limited to project manager, superintendent, general foreman and craft foreman. The craft foreman is an individual who oversees the Work typically being performed by up to 10 craft workers.

Competent Person: An OSHA "competent person" is defined as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. By way of training and/or experience, a competent person is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation, and has the authority to correct them. Some standards add additional specific requirements which must be met by the competent person.

Job Safety Analysis / Pre-task (JSA): A detailed 3-step analysis that helps eliminate and/or reduce risk. This 3 step process breaks each task down into basic job steps, identifies existing and potential hazards associated with each step and provides recommendations/procedures to eliminate reduce or control hazards, and the option of assessing potential severity.

Step one: Describe the operation to be performed in the sequence of the

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basic job steps

Step two: Identify the hazards or potential hazards at each step.

Step three: Assess the risk the hazard presents; describe how the hazard is controlled.

Purchaser Representative (s): The Purchaser Representative serves as the primary interface between the Contractor, station personnel, and other corporate support functions. This individual is responsible for the oversight of contracted personnel to assure compliance with the contract documents (purchase order, specification and contract), field construction work and continuous monitoring of project safety.

1.1 RESPONSIBILITIES

1.1.1 CONTRACTOR RESPONSIBILITY

Contractor shall take all necessary precautions for the safety and health of its employees and those of its subcontractors engaged in this Work, and shall comply with all applicable OSHA Standards and provisions of other Federal, State, and Municipal safety laws and Building Codes. The Contractor shall comply with all safety and health rules and regulations established by Purchaser, including, but not limited to, the safety and health rules outlined in Purchaser's Contractor Safety Orientation. The Contractor is solely responsible and accountable to ensure their personnel work safely, and Contractor management must enforce safe work practices. It is not the responsibility of Purchaser to supervise contractor personnel or certify equipment being used. For any job tasks or equipment operation requiring specialized certification or licenses (i.e. asbestos, crane, forklift, etc.), a copy of such certification and/or licenses shall be provided to the FE representative prior to performing said task/operation. The Contractor shall designate a qualified person(s), acceptable to the Purchaser, to oversee site safety and health. The designated individual(s) shall be at the job site at all times while Work is being performed. The name, position, and qualifications of those designated must be provided to the Purchaser Representative prior to beginning work.

1.1.2 SAFETY TRAINING REQUIREMENTS / EMPLOYEE ORIENTATION

FirstEnergy Fossil Generation Contractor Safety Orientation: Contractor shall ensure that all personnel (including subcontractors) are given the FirstEnergy Fossil Generation Contractor Safety Orientation, prior to commencement of Work. Orientation shall be documented on (Form X-3920- Contractor Orientation Attendance Sheet), with a copy provided to the Purchaser Representative.

It is the responsibility of the Contractor to provide properly trained and qualified personnel to perform work under the Contract. This includes training required by regulation (i.e. OSHA, etc.), general safe work practices and all applicable hazards specific to the contracted Work. Training must be completed and documented prior to beginning work. All training documentation must be available for review by the Purchaser upon request.

FirstEnergy has a two part orientation process for contractors providing services at FE facilities. In the first part of the orientation process, the Purchaser will provide the "FE Contractor Supervisor Orientation" - "Train the Trainer" session to Contractor personnel that have been selected to conduct site safety orientations. In the second part of the orientation

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process, the Contractor Representative/s that has successfully completed the "FE Contractor Supervisor Orientation - Train the Trainer" orientation will be expected to deliver the "FE Contractor Supervisor Orientation" to all contractor supervision, as defined in Section 1.0, and the "FE Contractor Craft Orientation Program" to all contractor craft employees.

The "FE Contractor Craft Orientation Program" shall consist of the FE Contractor Safety Video, the current FE Safety Handbook and corresponding Contractor Safety Orientation Handbook presentation, which includes a "Knowledge Check".

Frequency of orientation is addressed in FirstEnergy Fossil Generation Orientation Procedure- FGP-SAF-0054.

Contractor shall conduct JSA/Pre-Task and hazard recognition training for all on-site personnel and supervision during the site safety and health orientation. This training is required for all employees before beginning Work at Purchaser facility.

In addition to all training referenced above, at least one member per shift of Contractor site supervision shall have successfully completed the OSHA 500 or 510 (OSHA 30 hour training for construction standards), as well as training (conducted at least annually) specific to hazards that may be encountered during the performance of their work. Contractor shall provide documented evidence of successful completion to the Purchaser Representative. NOTE: On a case by case basis, the local FE Safety Professional may waive the OSHA 30-hour requirement due to the nature of Contractor's Work (i.e. on a small two-man repair job).

1.1.3 SAFETY AND HEALTH COORDINATOR

Contractor shall provide, at a minimum, a separate on-site, full-time Safety and Health Coordinator for each shift of Work where the total of craft personnel (Contractor and its subcontractors) exceeds 25 personnel.

Minimum qualifications for this individual(s) include completion of the OSHA 500 or OSHA 510 (OSHA 30 hour training for construction standards), as well as training and/or satisfactory experience relevant to the work scope. Examples of additional training and/or experience necessary to ensure effective site safety and health processes are:

- Advanced safety and health degrees;
- Certifications such as: ASP, CSP, CSHM, CHST, CIH;
- Field safety experience in the utility industry.

Contractor shall provide Purchaser with the resumes of proposed Safety and Health Coordinator personnel. Purchaser will review the qualifications of each individual and notify the Contractor in writing of Purchaser acceptance/ rejection of each individual prior to beginning work.

Purchaser may request Contractor to provide for a full-time Safety supervisor for Work with fewer than 25 craft personnel per shift if Purchaser determines the nature of the Work justifies additional safety oversight.

1.1.4 PRE-MOBILIZATION MEETING

Contractor and Contractor's subcontractor representatives shall attend a pre-mobilization meeting to discuss, communicate, and assure compliance with

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appropriate safety and health procedures and requirements. This meeting shall be coordinated with the Purchaser Representative.

1.1.5 ENFORCEMENT GUIDELINES

It is not the responsibility of Purchaser to supervise, discipline or train Contractor personnel. Contractor is solely responsible and accountable to ensure their personnel work safely and must enforce safe work practices. Contractor shall remain solely responsible for the proper and safe use of all its tools and equipment, and provide training and information necessary for safe work practices.

"Life Saving Rules"

- Clearance Program violations
- Confined Space violations
- Failure to protect against exposure to a fall hazard of four (4) feet or greater

-- Scaffold modifications made by anyone other than scaffold Contractor's Competent Person

- Rigging / Hoisting: Walking or working under a suspended load is strictly prohibited.

-- Electrical Safety: Wear appropriate arc rated personal protective equipment (PPE) per OSHA requirements and utilize electrical safety work practices when working on or near exposed electrical equipment/parts.

Any individual found in violation of OSHA standards and/or any required site-specific rules or regulations are subject to removal from the site. This includes any lack of safety performance or unacceptable behavior or work practices that place personnel at risk of injury such as:

- Unsafe job performance.
- Failure to take or pass drug/alcohol test.
- Participating in pranks, horseplay or practical jokes.
- Failure to report injuries and/or accidents.
- Fighting or acts of aggression (i.e. workplace violence)

Removal from site applies to Contractor employees who violate the above rules, and/or Contractor supervision/representatives that knowingly, willfully, overlooks or directs their employees to engage in activities that will result in a violation of these rules.

Dismissed contractor personnel shall be removed from all FirstEnergy Fossil Generation facilities for a period of time determined by FE Management.

1.1.6 DISCIPLINE

Contractor shall utilize (Form X-3930 - Contractor Removal Report), to report any Contractor employee who has been removed from the site for committing a safety, health, or security violation. The completed form shall be distributed confidentially to FE Station Management, and the FE Construction Safety Representative. It is the Contractor's responsibility to notify any employee removed from the work site that they are prohibited at any of the Purchasers facilities for a period of time as determined by FE Management. In addition, it is the Contractor's responsibility to notify the employee's union representative that a violation of an FE Safety Policy has occurred. FE Management shall reserve the right to determine the affected Contractor employee removal period applicable to all FirstEnergy Fossil Generation Facilities. (See Substance Abuse Program, Section 2.5, Discipline, for specific instructions regarding substance abuse violations).

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1.1.7 CORRECTIONS OF SAFETY AND HEALTH VIOLATIONS
Purchaser will endeavor to notify Contractor of apparent safety and/or health violations and Contractor shall take all necessary steps to correct such violations. However, Purchaser assumes no responsibility or liability with reference thereto.

Contractor safety performance will be monitored and evaluated during the project by Purchaser Representative (s). Purchaser may conduct random safety audits. Contractor shall cooperate fully with Purchaser Representative (s) during a safety audit.

Contractor shall immediately correct any shortcoming brought to the attention of Contractor by Purchaser. Purchaser shall have the authority to immediately stop any Work, which in the opinion of Purchaser constitutes a safety concern. It is Contractors responsibility to undertake the necessary steps to satisfy Purchaser of remediation action to provide a safe workplace.

Safety Inspections:

Contractor and their subcontractors shall conduct regular informal inspections in addition to a formal weekly safety and health inspection of the entire work site (area of project) and immediately implement corrective measures on any violation of safety rules or regulations as established by the Federal, State or Local requirements or Purchaser site-specific requirements. The FE Representative should initiate the weekly safety and health inspection which is documented utilizing (Form X-3956- Contractor Walk Down). Contractor Site Leadership shall participate in all Contractor Walk Downs.

Contractor shall conduct a final safety walk down with the Purchaser Representative and submit final safety and health documentation and injury and illness statistical information utilizing (Form X-3957- Contractor Final Walk Down). The purpose of the Final Safety Walk-down Process is to ensure affected facilities and equipment are left in a safe and acceptable condition prior to Contractor leaving the site.

Safety Planning:

Planning for safety and health shall be a part of the overall management process, and shall be Contractor's responsibility. Contractor shall implement a safety planning program that includes the following (at a minimum):

- Daily job briefings
- JSA's/ Pre-task Analysis completion
- Weekly safety meetings
- Job Specific Safety Plan
- FE Human Performance Tools: Procedure Use and Adherence, Effective Communications, Effective Job Briefs, Questioning Attitudes, Self and Peer Checking including the 2-Minute Drill and STAR.

The Site Safety Plan is to be completed by the contractor and submitted to the FE Representative before the start of Work.

Contractor shall be responsible for maintaining all documentation and records of all safety meetings, and shall make this information available to Purchaser upon request.

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1.1.1.8 JOB SAFETY ANALYSIS (JSA) / HAZARD RECOGNITION
Contractor employees shall conduct a JSA/Pre-Task review and accompanying hazard assessment for each job task. It is recommended that the Contractor use its own JSA form, but if Contractor does not have a form available the Purchaser will supply a JSA form. Should a hazard that is not listed on the JSA form be recognized during the Work shift, Contractor shall implement measures necessary to make the work site safe. Any sub-standard JSA processes observed or reviewed during the actual site Work shall be corrected immediately and retraining of Contractor's personnel shall be performed as necessary. Contractors shall implement a JSA review program, which includes supervision review of JSA's. Copies of reviewed JSA's shall be made available for review by Purchaser Representative.

If Contractor's personnel fail to comply with the JSA, Contractor shall take appropriate measures to correct the situation; which may include stopping the Work, the Contractor taking disciplinary action to its employees or immediately removing Contractor employees from FirstEnergy Fossil Generation Facilities.

1.1.1.9 NON-ENGLISH LANGUAGE PERSONNEL

In the event that Contractor or its Subcontractors employ personnel with limited English speaking, reading, and/or writing abilities, Contractor shall take all steps necessary to ensure that personnel understand the scope of the Work they are to perform; the hazards associated with the Work; the necessary precautions to protect themselves from the work hazards and that they are able to perform the Work in a safe manner.

1.1.1.10 INCIDENT REPORTING

Contractor shall report all incidents requiring first aid, near misses, and doctor-attended injuries (whether an OSHA recordable, or not) to Purchaser immediately. Immediately is defined as the point in time when Contractor is aware of the incident.

First Aid injuries shall be logged onto the Contractor Safety Log, Form X-3927.

The initial report shall be followed by a written report within twenty-four (24) hours on (Contractor's Internal Incident Form).

The final incident report must be issued within four days on Form NS-146.1 - Contractor Incident Report. Once the means to submit this information electronically has been established, it will supersede the requirement to use form NS-146.1.

Purchaser's Contractor Incident Report Form shall be utilized to document all illnesses, OSHA-recordable incidents, Doctor Attended First Aids, and near-misses at Purchaser sites

Contractor also will provide FirstEnergy with a copy of the OSHA Form 301, Injury and Illness Incident Report, or equivalent within four (4) days

Contractor's report will include, in addition to specifics on the employee and the incident, a review of the circumstances, an analysis of the cause, details of any remedial action and Immediately Removed from FirstEnergy Fossil Generation Facilities taken, and recommendations for prevention in

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the future.

1.1.11 REPORTING REQUIREMENTS

The following is a detailed description of the safety reporting forms required for all contract work at FirstEnergy Fossil Generation Facilities.

OSHA Form 300 - Log of Work-Related Injuries and Illness
Contractor companies must submit a completed OSHA Form 300 to customer upon request for at least the 3 previous years. These forms must be legible and filled out completely with the exception of column "B".

Third Party Vendor Prequalification
Contractor companies may be asked by purchaser to submit safety and insurance data to a third party. Should the purchaser enter into agreements for these services, the purchaser will expect full cooperation with selected third party for these requests. Failure to submit data to purchaser's third parties could lead to disqualification of Contractor for work on purchaser's property. Data requests include, but are not be limited to, current insurance certificates, all safety data required to determine contractor safety qualification as described in section 3.0 of this document, and the reporting requirements included in this section. Contractor shall verify qualifications of all subcontractors and document findings on FE form X-3958 unless the subcontractor has subscribed to purchaser's third party as a contractor under the purchaser's account. Form X-3958 is to be submitted to the purchaser's representative after validating the subcontractor's status relative to purchaser's safety requirements.

Form X 3920 - Fossil Contractor Safety Orientation Attendance Sheet:
This form tracks contractor employees who have completed the safety orientation. Submit completed form to your Purchaser Representative and maintain a copy onsite.

Form X 3927 - Contractor Safety Log:
The safety log must be completed on a monthly basis; the log shall be submitted no later than the fifth day of the following month (one form for each station where Work was performed work in the preceding month). Contractor Safety Logs should not include information about sub-contractors. The general contractor is to assure that all sub-contractors have submitted their safety logs accordingly. All contractor safety logs must be emailed to contractorsafety@firstenergycorp.com, along with a copy to the Purchaser Representative.

Form NS 146.1 -Contractor Incident Report (NEAR MISS AND DOCTOR ATTENDED INJURIES):
Any incident must be reported to the Purchaser Representative immediately. The contractor must provide an initial update of the incident within 24 hours. The final incident report must be issued within five days. Submit Contractor Incident Report along with any other associated reports or information to the Purchaser Representative.

Form X 3930 - Contractor Removal Report:
This form consists of two pages. The first page is to be completed by Contractor Management, and the second page is completed by the respective Power Station Management/Generation representative. This form will be completed to report any Contractor employee who has been removed from the site due to a serious safety violation, controlled substance violation,

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zero-tolerance rule violation, or security violation. Submit the form based on the routing instruction at the bottom of the page. Note: Since this form is also used to report anyone who is being removed for a substance abuse violation, please note that for substance abuse removals, the form must be sent confidentially, to the Construction Safety Representative.

Form X-3956- Contractor Walk Down - This form is to be initiated by the Purchaser Representative or designee and completed by contractor along with corrective actions. All corrective actions must be documented on this form along with a date of completion.

Form X 3957 - Final Contractor Safety Walk Down / Verification:
Contractor shall conduct a final safety walk down with the Purchaser Representative. Submit final safety and health documentation and injury and illness statistical information utilizing this form. The purpose of the Final Safety Walk-down Process is to ensure affected facilities and equipment are left in a safe and acceptable condition prior to Contractor leaving the site.

1.2 SITE REGULATIONS

1.2.1 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal safety and health equipment, e.g., hard hats, eye protection, respirators, electric arc/flame clothing and face protection, etc., necessary for proper protection of Contractor's employees shall be utilized in all required areas and shall be the responsibility of Contractor. High-Visibility outerwear (vest or equivalent) shall also be worn by all employees working outside around mobile equipment/vehicles. All personnel shall wear long sleeves rolled down when performing any hot-work, or exposed to physical hazards such as trees, brush, hot steam lines, etc. At no time will personal protective equipment be loaned, sold or given to Contractor by Purchaser.

1.2.2 FALL PROTECTION

Fall protection requirements must be implemented and enforced when performing work that exposes workers to a fall hazard of four (4) feet or greater. Where personal fall protective systems are utilized, 100% tie-off is required. Failure to tie-off when exposed to a fall that is four (4) feet or greater may result in immediate removal.

Personal fall arrest systems shall be rigged such that an employee can neither free fall more than four (4) feet or contact any lower level. Retractable lanyards are recommended for fall hazards less than 18- 1/2 feet.

All personnel shall refrain from stepping, standing, walking, or working on piping or plant equipment. Temporary work platforms, ladders or other means shall be considered in lieu of stepping, standing, walking, or working on piping or plant equipment.

Working on Roofs

Regardless of the distance from the leading edge, Contractors will not rely upon warning line systems or controlled access zones to protect employees from fall hazards during roofing work. Safety monitoring systems, in combination with warning line systems, shall not be used while conducting

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roofing work at FirstEnergy Fossil Generation facilities.

1.2.3 HOUSEKEEPING

The work site is to be kept in a safe and clean condition, as determined by purchaser, as the job progresses and be left in a condition that is neat, clean, safe and acceptable to Purchaser Representative at the completion of the Work. Contractor is responsible to barricade and identify danger areas and shall conduct its Work in such a manner that Purchaser employees and equipment are not jeopardized, injured or damaged.

1.2.4 SITE VEHICLES

Purchaser is not responsible for damages to vehicles of Contractor or vehicles of its employees. Posted speed limits governing safe travel in and around the site shall be strictly adhered to. Purchaser shall have the right to inspect all vehicles. All personnel operating a vehicle on Purchaser Facilities must have a current driver's license. All site construction vehicles must have audible back-up alarms, and must be maintained in a safe operating condition. All occupants of construction vehicles must be properly restrained.

1.2.4.1 Vehicles above 26,000 pound GVWR

Full compliance is expected with the "Contractor Large Hauling Vehicle Safe Work Requirements" document. Full program details can be found in Attachment 1 of the "Contractor Supervisor Safety and Environmental Orientation". Drivers of vehicles above 26,000 pound Gross Vehicle Weight Rating (GVWR) must be a minimum of 18 years of age, meet DOT criteria described in 49 CFR 391.41 for physical examinations, and comply with the following while working on FirstEnergy Fossil Generation facility property for two days or more.

- Annual driving record review documented and retained on file, Site Specific Orientation review (Driver Pamphlet) during the first visit each day, Initial driver training that is refreshed and documented every two years, Observations, commentary drives, and additional monitoring, Rest breaks outside of the vehicle every four hours during the first 10 hours of work and every two hours thereafter.

- Pre-Use vehicle inspections that is documented and maintained for a minimum of 90 days and include the following (in addition to requirements found in 29 CFR 1926.601(b)(14):

- * Gauges (fuel, etc.), Back-Up Alarm, Spill kit, Fire Extinguisher, Wheel Chocks, Windows/Mirror Condition, Fluid Levels (windshield washer, oil, hydraulic, etc.), Tire Condition, Frame/Suspension

- Compliance with Safety planning, job briefs, safety meetings, vehicle maintenance, communication, and any additional safe work practices as described in contractor orientation material

In addition to OSHA requirements, vehicles shall maintain the following items, at a minimum:

- Back-Up Alarm (that is distinguishable above background noise levels in area of backing), functional gauges (i.e. fuel and speedometer), all manufacturer lights shall be functional, marker lights on top and backs of vehicles, driver and passenger side mirrors, windshield washer fluid, wheel chocks (minimum of one pair or equivalent means), fire extinguisher, and a spill kit

1.2.5 POWERED INDUSTRIAL VEHICLES

All operators of powered industrial trucks (i.e., forklifts or other heavy

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equipment) on Purchaser Facilities must have a current driver's license. The Contractor must retain documentation of appropriate training in accordance with state and federal OSHA standards, Department of Transportation, and Department of Motor Vehicles codes and standards. Contractor is responsible to meet all OSHA regulation pertaining to powered industrial trucks, mechanized equipment, motor vehicles, cranes derricks and hoists which includes, but is not limited to, 1926 subparts N and O.

Contractor shall maintain spill equipment materials on each industrial truck or near any stationary vehicles (i.e. cranes) and other vehicles brought on-site. The industrial trucks and vehicles shall be free of leaks and maintained in good condition. Leaking industrial trucks and vehicles shall not be brought on-site. All spills from industrial trucks and other vehicles shall be reported immediately to the Purchaser Representative. Daily documented inspections are required to assure the condition of equipment as described in "Contractor Supervisor Safety and Environmental Orientation".

1.2.6 ELECTRICAL HAZARDS

Contractor's attention is called to the fact that there are high voltage energized facilities on the plant property, e.g., underground conductors, overhead lines, and numerous conductors in cable trays throughout the main facility. Contact with any exposed energized conductor or exposure to electric arc flash may produce serious injury or death. Contractor is responsible to instruct and supervise employees in such a manner to ensure effective protective measures are implemented. Upon Contractor's request, Purchaser will identify the energized facilities prior to commencing Work, and if at any time thereafter Contractor may have any doubt about whether the Work can be performed safely, Work will be stopped and necessary steps taken to ensure a safe work procedure.

1.2.7 OPERATING PLANT HAZARDS

Contractor's attention is called to the fact that there are high temperature/pressure piping and equipment; operating rotating equipment (pumps, cranes, and other equipment) and vehicle traffic on the facilities property. Contractor is responsible to instruct and supervise all employees in such a manner to ensure employee and equipment safety. If at any time Contractor may have any doubt about whether the Work can be performed safely, Work will be stopped and necessary steps taken to ensure a safe work procedure.

1.2.8 SANITARY FACILITIES

Contractor shall be responsible for providing and maintaining toilet, washroom, change trailers, break areas, trash receptacles, and sanitary facilities for its employees. The station facilities will not be available to Contractor or its employees. Plans for the type of toilet and sanitary facilities must meet Purchaser approval prior to the commencement of Work and shall be maintained in compliance with governmental regulations.

1.2.9 SCAFFOLDING

All scaffolding must be erected, maintained, and used in accordance with applicable OSHA Standards along with site specific policies and procedures. The Contractor will be responsible to ensure all employees, subcontractors and agents working on scaffolding are properly trained and qualified as a competent person, erector / dismantler, or user. Scaffolding shall be inspected by a "competent person" prior to Work being performed on the scaffold and prior to work each shift that scaffolding is utilized.

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Inspections shall continue for the duration of the period the scaffold is in use (defined as the start of erection to the final dismantling of the scaffolding). Contractor must notify Purchaser Representative when scaffolding is ready for inspection and shall incorporate a scaffolding inspection tagging system approved by Purchaser for all scaffold types.

Fall protection is required when exposed to a fall hazard four (4) feet or greater, including lead erectors. If fall protection is not feasible or poses a greater hazard, the Contractor shall notify Purchaser Representative.

Contractor shall install swing gates on all scaffolds when feasible. When swing gates are not feasible, Contractor shall notify Purchaser Representative for review.

Scaffold ladders that exceed a 20 feet vertical climb shall be protected by one of the following: ladder cage or fall protection systems utilizing an appropriate anchorage. This criteria is also applied to scaffolding that is erected on an elevated surface where access and egress ladders to any level of the scaffolding exposes individuals to a fall hazard of more than 20 feet (i.e., duct work, elevated walkways, etc.). Breaking of a ladder to rest platform is acceptable from the ground to 20 feet, however, it cannot be used when a fall hazard exists greater than 20 feet for access and egress.

When constructing scaffolding platforms, the front edge of all platforms shall be located as close to the work as reasonably possible but in no circumstances shall be greater than 12" without proper fall protection.

If requested by Purchaser, and prior to the start of erection, Contractor shall submit a scaffolding design drawing (with appropriate Professional Engineer stamp) for review for each major installation of scaffolding.

1.2.10 CRANE OPERATIONS & RIGGING PRACTICES

The Contractor Rigging Checklist, FirstEnergy Form X-4106, shall be completed for any lift equal to or exceeding 500 lbs., any lift equal to or higher than six (6) feet regardless of weight, any lift requiring the use of four (4) or more slings, any lift requiring the use of two (2) cranes simultaneously, or when working within twenty (20) feet of overhead electrical conductors and submit a safe lifting plan prior to making an Increased Risk Lift. For all lifts, Barricades shall be established to prevent personnel that are not involved in the lift from entering the area. Suspended Loads SHALL NOT be left unattended unless specifically approved by the designated FE Representatives.

1.2.11 MATERIAL HANDLING

All material handling personnel must comply with current FirstEnergy material handling practices as described in "Contractor Supervisor Safety and Environmental Orientation" material. Among the requirements, contractors must conduct task specific pre-job briefs for any material handling operation considered to be high risk due to meeting any of the following criteria; toolboxes over 500 pounds, loads of 500 pounds or greater with a high center of gravity (potentially unstable), loads greater than 300 pounds descending or ascending a ramp or stairs, and movement of 1,000 pounds or greater by manual carts.

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1.3 EMERGENCY PROCEDURES

1.3.1 PLANT PHONE SYSTEM
Contractor shall be familiar with and instruct its employees on the use of the plant phone/paging system. Use of the plant phone system by Contractor employees shall be restricted to work-related business and to inform the control room of emergency conditions, e.g., serious accidents, fire, equipment damage, malfunction, etc. Horseplay involving use of the plant paging system will not be tolerated and violators shall be subject to immediate dismissal from the site. It will be Contractor's responsibility to remove any employees from plant property who violate this policy.

1.3.2 FIRST AID
Contractor must make provisions for first aid services for employees and all subcontractors' employees. Contractor shall be responsible for proper management of any infectious waste generated by these activities.

1.4 CLEARANCE PROGRAM

1.4.1 CONTRACTOR RESPONSIBILITY
Contractor shall obtain from Purchaser a copy of the FirstEnergy Fossil Generation Safety Clearance Program.
Contractor is required to understand their role in complying with the Purchaser Clearance Program. Contractor will be assisted by the FE Representative for all Clearance (lockout / tag out) activities. The Contractor will be required to familiarize its employees, subcontractors and agents with the Purchaser Clearance Program. Contractor employees must be familiar with Purchaser program prior to the commencement of Work. Contractor supervision shall be responsible for following the requirements of Clearance procedure, including control of the Worker Signature Sheet-Form 462 C.

1.4.2 PERMISSION TO OPERATE EQUIPMENT
Contractor or its employees shall not operate any valves, electrical switches, or set in motion any machinery that is part of Purchaser property without first obtaining approval and operating instructions from Purchaser or Purchaser Representative. This includes newly installed equipment being supplied by Contractor. This requirement does not apply to construction equipment and construction machinery supplied by Contractor or equipment designated by Purchaser for Contractor's exclusive use.

1.5 CONFINED SPACE

1.5.1 CONTRACTOR RESPONSIBILITY
Contractor shall abide by all Contractor Confined Space Entry Provisions as outlined by Purchaser Permit Required Confined Spaces Program. All entries into confined spaces shall be made in accordance with 29CFR 1910.146 at a minimum.
Contractor is responsible for implementing a confined space work plan including implementation of the confined space entry procedure in Contractor's Proposal. This includes but is not limited to, air monitoring, identification and removal of any remaining hazards, identification and removal of any Contractor introduced hazards and performing all work in the confined space as a permit required confined space if the remaining hazards cannot be removed. Contractor shall exhaust all reasonable remedies before working in a confined space under the classification of a permit required

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confined space.

Contractor shall review all confined space classifications (i.e. permit required, alternate procedure, re-classified) with the Purchaser Representative prior to beginning work. Contractor shall provide the following when working in a confined space:

- A competent person trained and responsible for determining acceptable entry conditions, capable of recognizing the hazards of a permit confined space and able to specify necessary control measures to insure worker safety.
- Prior to entry into the confined space, Contractor shall provide all equipment and shall perform all atmospheric testing for oxygen, flammables and toxics, and for all subsequent monitoring.
- Purchaser Representative shall not perform atmospheric monitoring for Contractor other than initial monitoring used to determine classification of confined space. Contractor shall supply monitoring equipment and shall monitor applicable confined spaces and maintain all required documentation.
- Upon request, Contractor shall provide air-monitoring results to the Purchaser Representative. Contractor shall not use Purchaser's atmospheric monitoring equipment.
- Contractor shall provide all equipment required to ventilate work areas.
- Contractor shall provide and install all barricades, signs, etc., required to identify confined spaces.
- Contractor shall provide all training of its personnel pertaining to confined spaces as well as equipment its personnel may require (i.e., respirators, harnesses, etc.).
- Contractor shall be responsible for providing a confined space rescue team in compliance with all applicable OSHA standards for work conducted within a permit required confined space.

1.5.2 CONFINED SPACE PLAN

Contractor must have in place a permit required confined space program for the protection of its employees from the hazards associated with the entry into confined spaces. Contractor requirements include:

- A copy of the FirstEnergy Fossil Generation confined space program will be given to the Contractor. An agreement to train contractor employees, subcontractors or agents about the Purchaser Confined Space Program must be in place, with training completed, prior to the commencement of work.
- Contractor's proposal shall include a specific plan as to how work inside the confined space will be performed with respect to the confined space regulations. Contractor's plan shall include provisions to admit Purchaser Representative into the confined space for inspection of Contractor's Work.

1.6 FIRE PROTECTION

1.6.1 CONTRACTOR RESPONSIBILITY

Contractor shall provide and maintain portable fire protection equipment for protection of all buildings, material, and equipment within the area. Where the possibility of serious fire might result, Contractor must inform Purchaser Representative and plant management before commencing Work and provide proper standby firefighting equipment.

Contractor shall furnish and maintain adequate fire protection for all temporary facilities onsite, including but not limited to, change houses, offices, tool trailers, shops construction equipment, trucks, etc.

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Contractor's engaged in flame cutting, welding, grinding, or any other hot work operation shall furnish and have available at all times during the performance of such operations, sufficient fire extinguishers, water hoses, fireproof blankets, etc. Contractor shall erect screens to protect passersby from weld flash. All hot work shall be performed in accordance with all codes and regulations, including but not limited to, site requirements for permits for burning, welding and grinding. The Contractor is prohibited from welding, burning, cutting, brazing or performing other "hot work" without prior authorization (i.e., Hot Work permit) from the Purchaser Representative.

1.6.2 FLAMMABLE STORAGE

Flammable and combustible liquids shall be stored in approved labeled containers meeting OSHA requirements. All use and storage must meet applicable governmental regulations and Purchaser safety regulations. Secondary containment shall be provided in accordance with best management practices. Purchaser Representative shall authorize locations and plans for all storage areas.

1.6.3 OPEN FIRES

Open fires are prohibited. This includes, but is not limited to, the burning of trash and debris or other materials.

1.7 POTENTIALLY HAZARDOUS MATERIALS

1.7.1 AIR MONITORING AND SAMPLE ANALYSIS

Contractor shall conduct the necessary on-site air monitoring either by third party or qualified contractor employees. Laboratory test analysis shall be performed by an independent third party company for Hazardous Materials when required to comply with site safety/health practices or applicable laws, rules, and regulations. Contractor, on a daily basis, shall post the results of all third party air monitoring. The results shall be posted at a minimum of three locations: 1) the craft personnel site entrance; 2) change trailer; and 3) Hazardous Material Work area. The results shall be posted under the letterhead of the third party air monitoring company.

For off-site laboratory testing, the laboratory shall be accredited under the Laboratory Accreditation Program of the American Industrial Hygiene Association (AIHA) and as applicable; be licensed by the WV Bureau of Public Health as an Asbestos Analytical Laboratory (if analyzing asbestos samples from WV) and participate in the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) for Bulk Laboratories or the AIHA's Bulk Asbestos Proficiency Analytical Testing Program. Evidence of said accreditation shall be provided prior to performing said monitoring. All third party air monitoring companies performing on-site analysis for fibers shall utilize sampling and analytical methods specified in Appendix A of 29CFR1926.1101. A copy of all bulk and air (area and personal) sampling results shall be forwarded to FE Safety Representative upon request.

1.7.2 WORK AREA INSPECTION

After successful completion of Hazardous Material abatement (asbestos, lead, etc.) and any applicable clean air sampling, all involved Contractors, and their on-site craft labor union stewards shall inspect the Work area, before additional work activities are permitted to begin in that area. Purchaser's Agent or Purchaser Representative shall attend this inspection.

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Purchaser may provide an on-site independent Hazardous Material project industrial hygienist to audit Contractor compliance with this specification and the appropriate Hazardous Material regulations.

An insulation contractor shall have a "competent person", as defined in the applicable OSHA regulations, on-site during asbestos removal projects. Contractor shall provide Purchaser a certificate of "competent persons" training prior to start of project.

For asbestos and lead enclosure work, Contractor shall install and maintain an adequate amount of observation windows to allow for inspection from the enclosure exterior.

1.7.3 HAZARDOUS MATERIALS BROUGHT ONSITE BY CONTRACTOR
Before being brought on site, Contractor shall label all Hazardous Materials in accordance with OSHA's Hazard Communication Standard (29CFR1910.1200) and shall provide Purchaser's Representative with two (2) copies of the following information for Hazardous Materials:

1. Complete list of all such materials;
2. Material Safety Data Sheet for each Material

1.7.4 HAZARDOUS MATERIALS EXISTING IN WORK AREA

1.7.4.1 Identifying the Presence of Hazardous Materials
Contractor shall determine whether, prior to or during the course of Contractor's work, the presence of any suspected Hazardous Material exists in Contractor's Work areas. Contractor shall immediately notify Purchaser verbally and by letter to Purchaser upon discovering the suspected Hazardous Material stating such presence. Contractor, including any of Contractor's employees, shall not perform any sampling or testing of a suspected Hazardous Material without the prior knowledge and approval of Purchaser. Any testing performed shall be done by qualified personnel in accordance with all applicable laws, rules, regulations, and procedures. If the tests of the suspected Hazardous Material reveal that the material is indeed hazardous in its present condition, then Contractor will develop a program to address the manner in which these materials are to be handled and shall review such program with Purchaser prior to implementation. This procedure shall in no way relieve Contractor of any responsibility regarding the use of or the methods employed in handling any Hazardous Material. Contractor shall have sole responsibility for any employee record keeping including medical surveillance, and personal or area monitoring.

1.7.4.2 Inorganic Arsenic
Contractor shall be aware that the potential for short-term occupational exposure to inorganic arsenic that exceeds the OSHA permissible exposure limit may exist in certain areas of the power stations. These areas include boilers, gas ducts, stacks, and the entire fly ash system.

Activities that create this potential for exposure include, but are not limited to:

- a. Working in areas of high airborne dust and/or fly ash, and
- b. Grinding, welding, wire brushing, or grit blasting on surfaces in contact with flue gas.

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Contractor shall be responsible for complying with all applicable federal, state, local and OSHA laws, rules, and regulations on this subject, and shall provide adequate protection for personnel who are within these areas.

Contractor shall submit a detailed procedure outlining their program for working in areas with the potential for short-term occupational exposure suspect of inorganic arsenic contamination.

Contractor shall limit exposure of personnel to inorganic arsenic concentrations that exceeds the OSHA permissible exposure limit through good work practices. As a minimum, Contractor shall take the following precautions when performing Work where the possibility for overexposure exists.

- a. Isolate the work area from extraneous personnel.
- b. Post warning signs at all approaches to the work area. These signs shall meet OSHA requirements.
- c. Clean fly ash accumulations from the work areas as much as practical. Vacuuming and water washing are recommended means for cleaning. Shovelng or brushing may only be used where the recommended means are not practical or effective. The use of air blowing is strictly prohibited.
- d. Require employees to wear proper respiratory, skin, and eye protection at all times.
- e. Require employees to practice good hygiene.
- f. Review all aspects of the Work with Purchaser's Technical Representative assigned to the job and notify Purchaser's Technical Representative before each phase of the work begins.

These precautions are not intended to diminish Contractor's responsibility to comply with all applicable federal, state, local and OSHA laws, rules, and regulations and those precautions outlined in their Work procedures.

1.7.4.3 Inorganic Lead

Contractor shall be aware that the potential for occupational exposure to inorganic lead exists while performing Work activities at the power stations.

Activities that create the potential for exposure include, but are not limited to:

- a. Manual demolition of structures, manual scraping, manual sanding, heat gun applications, and power tool cleaning without dust collection systems.
- b. Rivet busting, power tool cleaning without dust collection systems, cleanup activities when dry expendable abrasives are used, and abrasive blasting enclosure movement and removal where lead-containing coating or paint is present.
- c. Abrasive blasting, welding, cutting, and torch burning on structures where lead-containing coating or paint is present.

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Contractor shall be responsible for complying with all applicable federal, state and local, laws, rules, and regulations concerning inorganic lead, and shall provide adequate protection for personnel who may be exposed to lead.

When requested, Contractor shall submit a detailed written compliance plan addressing all elements specified in applicable OSHA regulations prior to disturbing any lead-containing material unless a written negative initial determination is provided indicating that no employee will be exposed at or above the action level.

Contractor shall limit exposure of personnel to inorganic lead concentrations through good work practices. Said practices should include, without limitation, consist of local exhaust ventilation and power tool cleaning with dust collection systems.

1.7.4.4 Chromium (Hexavalent)

Potential occupational exposures to chromium (hexavalent) may occur depending upon work tasks performed. Said work tasks include welding/cutting on chromium alloy steel or chromate painted steel, abrasive paint removal or other surface preparation on chromate painted surfaces, spray painting with chromate paints, boiler refractory removal, and work tasks disturbing large amounts of fly ash.

a. Contractor is responsible for conducting exposure assessments for their employees.

b. Contractor's work practices must comply with applicable OSHA hexavalent chromium standards, as well as any applicable environmental laws, rules, and regulations.

c. Contractor shall provide, and require the use of, appropriate personal protective equipment (including respirators) when necessary.

d. All air monitoring and sampling analysis shall be conducted following approved methods. Said methods of monitoring and analysis must measure chromium (VI) to within an accuracy of plus or minus 25 percent (+/- 25%), and can produce accurate measurements to within a statistical confidence level of 95% for airborne concentration at or above OSHA's action level. OSHA ID-215 meets this requirement.

1.7.4.5 Flue Gas Emissions

Typical flue gas from the combustion of fossil fuels will contain various components, including, but not limited to, Carbon Dioxide, Methane, Nitrous Oxide, Ammonia, Carbon Monoxide, Nitrogen Oxides, Sulfur Dioxide, Hydrochloric Acid, Hydrofluoric Acid, Sulfuric Acid, Particulate Matter and Volatile Organic Compounds. Contractor's personnel may encounter said gas when in the vicinity of boiler/ductwork leaks. Where appropriate, Contractor's employees shall be made aware of this possibility and be instructed on the hazards of boiler gas. Additionally, respiratory protection shall be worn when exposures can reasonably be expected to exceed OSHA and/or ACGIH limits/guidelines.

1.7.4.6 Combustible Dust

Combustible dusts are fine particles that could present an explosion hazard when suspended in air in certain conditions. A dust explosion can be catastrophic. Contractors must determine if the job being performed will

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create a combustible dust hazard. Contractors must take action to prevent potential combustible dust hazards in the work area.

If the Work being performed may create a combustible dust hazard, contractors must contact the designated Purchaser Representative and reach an agreement on how the hazardous condition can be abated before Work can proceed. In areas where work will be performed and the combustible dust hazard can not be eliminated, the following must be followed:

- Any electrical equipment used in these areas must be Class II, Division II rated.
- Use only approved cleaning methods.
- Static electricity must be controlled through grounding and/or bonding of all equipment.
- Hot work permits must be strictly followed.

1.7.4.7 Coal Dust / Flyash

Coal dust and fly ash may contain Silica. Contractor is responsible for determining whether there is a potential for its employees to be potentially exposed to silica above the OSHA Permissible Exposure Limit and for supplying the appropriate respiratory protection. When feasible, engineering and administrative controls shall be implemented to reduce exposure.

1.7.4.8 Asbestos

Asbestos containing material may be encountered in many different forms throughout FirstEnergy Fossil Generation Facilities. Solid forms may include thermal system insulation (applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components that prevent heat loss or gain), gaskets, packing, wiring, sprayed on surfacing materials, and roofing and flooring materials.

The location and quantity of some of this material may not be evident until it is discovered during actual work operations. Work activities in the vicinity of unknown, suspected materials shall be halted immediately. Contractor shall immediately notify Purchaser Representative. Work shall not continue until the material has been properly identified in regards to asbestos content. If the solid material contains asbestos, a FE approved licensed asbestos contractor shall perform any necessary abatement and ensure the area is safe to work. FirstEnergy Fossil Generation Facilities considers it a serious violation of its work practices for unauthorized persons to handle asbestos. Such violations could be cause for immediate termination.

1.7.4.9 Limestone Safety

Silica containing respirable dust particles may be generated by handling limestone. Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) and/or dysfunctions. Spilled materials, where dust can be generated, may overexpose employees to respirable quartz-containing dust. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Do not dry sweep spilled material.

1.7.4.10 Petroleum Coke Safety

Petroleum Coke Flyash is generated from the Circulating Fluidized Bed Combustion of Petroleum Coke. This flyash may contain varying amounts of crystalline silica. This product also has the potential to contain calcium

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carbonate (Limestone), calcium oxide, calcium hydroxide and sulfates which can react with water causing irritation or burning to the skin or mucus membranes. Personal protective equipment for working with this material may include: NIOSH approved respiratory protection and body covering to prevent skin contact. Proper hygiene practices shall also be followed.

2.0 CONTRACTOR SUBSTANCE ABUSE COMPLIANCE SPECIFICATIONS

Controlled substances, alcohol, and associated paraphernalia are prohibited from the workplace and Purchaser property. Contractor employee use, possession, or sale of controlled substances, alcohol, or associated paraphernalia while on Purchaser property is prohibited, and will result in immediate removal from Purchaser property.

As a condition of working at Purchaser's facilities, each Contractor will be required to abide by the terms of the Purchaser's FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specifications prior to beginning work onsite. Contractor shall have their on-site supervision knowledgeable of and fully capable of enforcing this Program and must notify each applicant and employee of the Program requirements (See attached FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specifications).

Contractor and its subcontractors performing Work at any of Purchaser facilities shall have an established substance abuse program, and/or abide by the provisions of the Purchaser Substance Abuse Program. The minimum requirements of this program must include pre-hire testing, testing for cause, post incident, and random testing as determined by Purchaser and/or Contractor. Screening substances and their associated cut-offs shall be in accordance with the requirements found in the Purchaser FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specifications. If there has been a safety incident involving Contractor's personnel, Purchaser has the right to require substance abuse testing of the employee as soon as practical after the incident.

An independent THIRD PARTY ADMINISTRATOR (TPA) has been selected to coordinate administration of the program between the CONTRACTORS and the PURCHASER. All CONTRACTORS, prior to beginning work at FirstEnergy Fossil Generation facilities, must contact the TPA to verify valid pre-employment tests in accordance with this program. Further detailed information on this program is outlined in the FirstEnergy Fossil Generation Contractor Substance Abuse Compliance Specification.

3.0 CONTRACTOR SAFETY STANDARDS

Contractor is advised that Purchaser requires that Contractor will maintain a certain level of safety standards in order to remain an approved contractor for performing work at Purchaser's fossil facilities. Unless otherwise modified by Purchaser, and in addition to Purchaser's other requirements, Contractor must demonstrate the following:

Item	CRITERIA
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TRIR:	TRIR <= 3.0 and also less than, or equal to, their published NAICS code TRIR.
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Documented Safety and Health Program : Contractor has a documented Safety and Health Program that meets OSHA Requirements.

Substance Abuse Program: Contractor has a documented program meeting criteria of FE Substance Abuse Program.

OSHA citations: No repeat, willful, or criminal citations within past three years.

EMR: Experience Modification Rate <= 1.0

FirstEnergy Fossil Generation Contractor Environmental Requirements

Introduction

FirstEnergy Fossil Generation will foster a safe and environmentally compliant workplace for all employees, contractors and visitors. We will accomplish this by ensuring that programs are in place and that work practices support the vision for environmental compliance as a core value. Leadership, commitment and involvement by all personnel will drive the pursuit of an injury-free and environmentally compliant culture.

These Contractor Environmental Requirements establish a standardized approach across the Fossil Fleet for assuring that work performed by contractors at generating sites is completed in a consistent manner that complies with the various federal, state and local environmental regulations and Company policies and guidelines.

All Contractors are required to ensure that they and their employees, sub-contractors, suppliers, vendors, and visitors, comply with the provisions of this manual. THE PROVISIONS OF THESE REQUIREMENTS SHALL BE STRICTLY ENFORCED.

These Contractor Environmental Requirements are a supplementary document to all governmental rules, codes and regulations, and does not negate, abrogate, alter or otherwise change any provisions of those rules and regulations. It is understood that the ultimate responsibility for providing a safe and environmentally compliant worksite is the responsibility of the Contractor.

1.0 GENERAL

FirstEnergy personnel must ensure that all contractors performing work at FirstEnergy Fossil Generation Facilities comply with all applicable environmental rules, regulations, and policies. FirstEnergy (FE) Representatives (Administrators) have the responsibility of ensuring that the contractors are informed of all relevant plant policies, their regulatory responsibilities pertaining to the contractor's work scope, and any potential environmental risks that may be associated with their proposed work scope. Any environmental issues identified by a contractor working for FirstEnergy must be immediately reported to the FE Representative. All excursions and environmental incidents and "near misses" must be reported to the FE Representative, who in turn notifies the Environmental Coordinator.

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1.1 DEFINITIONS

Emergency Response Spills: Spills, leaks or releases that require additional personnel or personnel with specific training to clean up or mitigate due to the quantity or hazards involved.

Environmental Incident: An event which results in a permit violation. An environmental incident is a type of excursion. Incidents are investigated and tracked.

Environmental "Near Miss": A "near miss" is any condition which had the potential of causing an environmental excursion or an incident affecting the air, water, or land or violating a site permit condition.

Excursion: any violation of a regulatory permit, or event that results in material being released to the environment such that a regulatory requirement is violated. Excursions include reportable spills and environmental incidents.

Hazardous Waste: Liquid, solid, contained gas or sludge waste that contains properties that are dangerous or potentially harmful to human health or the environment as defined by Resource Conservation and Recovery Act (RCRA).

Incidental Spills: Spills, leaks or releases that can be cleaned up by persons working in the immediate area.

MSDS: Material Safety Data Sheet required by OSHA. The MSDS sheet contains Health, Safety and Environmental information for a specific product.

NPDES: A National Pollutant Discharge Elimination System Permit that defines the limits of the discharge of materials to waters of the state.

Reportable Release or Spill: A release of oil or chemical to the environment above the "Reportable Quantity". A reportable spill is a type of excursion. The "Reportable Quantity" (or RQ) refers to the quantity of oil or hazardous substance that triggers a reporting requirement under federal law. The RQ for oil is any quantity that results in a "sheen" on water. The RQ for chemicals or hazardous substances can be found in the "list of lists" obtained by contacting the Environmental Coordinator or Corporate Environmental Department. If a substance exceeds its RQ, the release must be reported to the National Response Center and to the state and local EMA's. An RQ may be superseded by a state reporting threshold or criteria.

Spill Prevention, Control, and Countermeasure Plan (SPCC Plan): This plan covers oil spill prevention, containment and release reporting requirements and is required by USEPA for qualifying facilities. These plans are maintained at each generating station as stand alone plans or part of the overall facility response plan. This plan may also be called a Preparedness, Prevention and Control (PPC) Plan or Integrated Contingency Plan (ICP).

Stormwater Best Management Practices (BMP's): Physical, structural or managerial practices implemented to prevent or reduce contamination of stormwater.

Title V Permit: Operating permit required by major facilities that allows that facility to emit into the atmosphere.

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Used Oil: Any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.

Waterway: A waterway is any water body (lakes, rivers, streams, creeks, etc.) or any conveyance to a waterway (storm sewers, drainage ditches, groundwater, etc.). A waterway is deemed such regardless of whether there is water present in the water body or conveyance at the time of release. A "navigable" waterway is a waterway that is (or was) utilized by intrastate travelers or for intrastate commerce.

1.2 ROLES & RESPONSIBILITIES

Environmental Coordinator: Oversees environmental compliance and protection of the site. Works with the contractor, Contractor Coordinator and Corporate Environmental to review site environmental requirements and restrictions.

Corporate Environmental (CE): Corporate Environmental provides support and guidance to the FE Representative and Environmental Coordinator and may serve as the Contract Administrator for certain activities. Specifically, Corporate Environmental coordinates all air compliance testing and air emissions testing conducted at the Plant. Corporate Environmental may provide Contractor Administration for other work associated with control equipment (ESPs, FGDS, SNCR) work or a specific project for which it is serving as the Project Manager. CE may also coordinate consultant training at a plant.

Contractor: Contractors are responsible for following all federal, state and local regulatory requirements and Company policies while working at the plant. The contractor is responsible for immediately communicating any identified environmental issue with the Contract Administrator.

FE Representative (Administrator) (term used interchangeably): Enforces environmental requirements, policies and restrictions with contractors. Reports all environmental incidents and "near misses" to the Environmental Coordinator.

1.3 PERMITS, LICENSES AND INSPECTIONS

Contractors will secure, at their expense, all required licenses, permits and inspections necessary for performance and completion of the work scope. Before applications or notifications for such licenses or permits are filed by the contractor, the Environmental Coordinator, with assistance from Corporate Environmental, must verify the need for the permit or license and the accuracy of the information being provided. Copies of such licenses or permits shall be provided to the FE Representative within 5 days of receipt and the FE Representative shall become familiar with its conditions and requirements.

1.4 EMERGENCY PREPAREDNESS

Prior to commencing Work, Contractor shall review with the FE Representative its work-site specific environmental emergency response procedures for all potential discharges, spills or releases. Contractors are required to have

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adequate and appropriate spill containment and response materials for all substances, chemicals, materials or products that may be brought on-site. Additionally, FE personnel and the Contractor shall jointly agree to who will be responsible and to what extent for responding to an emergency situation based on personnel qualifications, availability, experience, etc. and the type of substances, chemicals, materials or products involved.

1.5 PLANNING

Planning for environmental awareness shall be part of the overall management process and is the Contractor's responsibility. Contractors shall implement an environmental awareness planning program that includes JSA's/Pre-Task Analysis Completion prior to the start of each job and the use of the checklist in Section 3.0. This 3-step process breaks each task down into basic job steps, identifies existing and potential hazards associated with each step and provides recommendations/procedures to eliminate, reduce or control hazards and the option of assessing potential severity.

Step One: Describe the operation to be performed in the sequence of the basic job steps

Step Two: Identify the hazards or potential hazards at each step

Step Three: Assess the risk the hazard presents; describe how the hazard is controlled.

1.6 INCIDENT REPORTING

Contractor must report all Environmental Near Misses to the FE Representative within 24 hours. This information is to include:

- *Specific location of incident
- *Date and Time of incident
- *Name of Contractor reporting incident
- *Description of Incident and Corrective Actions
- *Estimated Quantity Released

The Contractor is NOT to make any notifications to any Local, State or Federal regulatory agency regarding any Environmental Near Miss, spill, environmental excursion, etc. The only exception to this is in New Jersey, if a Licensed Site Remediation Professional (LSRP) is involved with the environmental work being completed, and a potential reportable incident is observed/discovered, the LSRP shall work with the Environmental Coordinator and/or members of the Corporate Environmental Department to promptly review the incident for reportability. If the incident is determined to be reportable, required regulatory notifications shall be made in coordination with the LSRP as appropriate. If there is disagreement regarding if an incident is reportable, the LSRP may still act under their regulatory and license obligations

FirstEnergy reserves the right to review the Contractor's near miss investigations and/or perform FirstEnergy's own investigation, for the sole purpose of verifying facts, protecting FirstEnergy personnel and property and limiting FirstEnergy liability.

1.7 ENFORCEMENT

It is not the responsibility of FirstEnergy to supervise, discipline or train Contractor personnel. Contractor is solely responsible and accountable to ensure their personnel work safely and in an environmentally compliant

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manner. Contractor shall remain solely responsible for the proper and safe use of all its tools and equipment, and provide training and information necessary for safe and environmentally compliant work practices.

Contractors shall conduct formal, documented weekly safety, health and environmental inspections of the entire work site (area of project) and immediately implement corrective measures on any non-compliant issues identified. Contractor shall conduct a final safety, health and environmental walk down with the FE Representative and any other FirstEnergy employee required by a parallel program (ie: Safety). This inspection shall ensure that affected facilities, equipment, etc. are left in a safe and environmentally compliant condition prior to the Contractor leaving the site.

1.8 CONTRACTOR CONSUMABLES

A log for all consumables containing SARA 313 chemicals brought on site by the Contractor is to be maintained. This log is to uniquely identify the particular consumable, the corresponding MSDS and the monthly consumption. It is to be submitted to the FE Representative on a monthly basis. Typical consumables for inclusion are: welding rods, grinding disks and wafers, resins and coatings.

2.0 SITE REQUIREMENTS

2.1 SPILL RESPONSE

In the event of a discharge, spill or release the Contractor shall identify the scope of the situation and make notifications as indicated below. FE personnel are responsible for assisting the Contractor in carrying out spill response duties at the work-site and other associated issues with the work. The Environmental Coordinator will verify proper clean-up of all discharges, spills or releases.

A spill is defined as the unintentional release of a material from the container or device storing, using or transporting the material and includes:

1. Regulatory and non-regulatory reportable releases;
2. NPDES permit noncompliance if the noncompliance is due to an unintentional release of a material.
3. Material still contained within a secondary containment structure if it has been unintentionally released from the tank within the containment; and
4. Spill events inside or outside of a building even if the area drains to wastewater treatment.

The types of spills are defined as follows:

Incidental spills are those that can be cleaned by persons working in the immediate area. Contractors must IMMEDIATELY respond to all incidental spills from their work area, equipment and vehicles. Contractors must notify FE Representative of all incidental spills before the end of a shift. Contractors may use spill response materials from the emergency spill kits located throughout the plant to avoid a reportable event. Contractor shall containerize all clean up materials and contact the FE Representative for proper disposal. Do not dispose of any spill clean up materials in the

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plant trash.

Emergency Response Spills are those that require additional personnel or personnel with specific training due to hazards involved. Contractors must notify the FE Representative or Station Control Room IMMEDIATELY of all emergency response spills and shall attempt to stop or prevent the material (chemical, oil, or product) from spreading, reaching a drain, and/or waterway; as long as conditions are safe to perform this task and the persons are properly trained or otherwise qualified to do so in accordance with Federal, State, and/or Local laws and regulations. FE personnel may assist Contractor in all required response actions until an outside emergency response contractor arrives on site. FE personnel may perform the duties of the On Scene Incident Commander.

FE personnel will initiate all notifications to any Local, State or Federal regulatory agencies; the Contractor is NOT to make any such notifications.

Contractor may be required to participate in FE's investigation into the facts and circumstances of an FE initiated agency notification that resulted from an environmental incident, spill, release, discharge, and/or event.

All costs incurred by the FE power stations for responding to spills caused by Contractors will be charged back to the Contractor.

2.2 OIL AND CHEMICALS

2.2.1 OIL CONTAINING EQUIPMENT

Temporary containments must be placed underneath all vacuum trucks and high pressure water pumps when operating. Vehicles entering FE property may be inspected for leaks and denied entrance if found to be leaking. All industrial trucks, vehicles, cranes, fork lifts, mobile lighting, pumps, compressors, generators, etc. shall be checked at a minimum of once a day for any indications of leaks. Any equipment found to be leaking must be either immediately corrected or safely removed from site. Proper spill response equipment shall be kept in the immediate vicinity to mitigate any potential spill. The spill response equipment at a minimum shall include: dry oil absorbent, oil absorbent cloths, drip pans, etc. along with caution tape to restrict access to the area in the event of a spill. Contractor shall be observant of the immediate area when positioning oil containing equipment to make sure it is not close to a storm drain (typically painted red, affixed with permanent lettering or a sign), drainage ditch or waterway. The Contractor must consult with the FE Representative if unsure of a specific drain discharge point.

If the industrial truck has a portable tank (pony, nurse, etc.) for fuel/oil, the spill response equipment must be located on the truck. Contractor shall check the tank level along with the tank, hose and nozzle at a minimum of once a day for any indication of a leak. Any defects shall be corrected by Contractor immediately. The bed of the truck shall be free and clear of any debris. Contractor's driver MUST stay with the vehicle during fuel/oil transfer activities. The Contractor shall immediately contact the FE Representative and report all leaks, spills and unusual activity or observations.

If the spill is small enough to safely clean up with the on hand spill response materials, do so immediately. Containerize all clean up materials and contact your designated FE Representative for proper disposal. Do not dispose of any spill clean up materials in the plant trash. In the event of

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a large spill release or any spilled material reaching a storm drain or waterway, notify the FE Representative IMMEDIATELY.

2.2.2 OIL AND CHEMICAL STORAGE

Contractors must have facility approval by the Environmental Coordinator before bringing on site any tank, tote or drum(s) with any oil or chemical. All such tanks, totes or drums must be secured during transport to, around and from the facility to prevent spilling, leaking, tipping, rolling or falling during transport. Contractors must ensure all temporary tanks, tote or drum used on site meet all local, state and federal regulations, including but not limited to: being in proper working condition, have no leaks, no rust or other signs of deterioration, display proper labeling and have all required secondary containment. Tanks either need to be double walled with a vent and level indicator or single walled with a vent and level indicator or a containment suitable to contain the contents of the tank plus 10%. All totes or drums with a capacity of 55 gallons and greater must be stored on spill pallets or in secondary containment structures designed to hold the capacity of the tote or drum plus 10%. Contractor shall provide overfill protection for all chemical and containers. This may be an overfill prevention device, written procedures and/or an attention getting high level alarm. Contractor must perform and document daily inspections for possible leaks from valves, pumps, flanges, fittings, and containers. Additional inspections may be required by FE in some cases.

MSDS's are to be provided by the Contractor to the FE Representative prior to bringing any oil and chemicals on site. Contractor's storage of all oil and chemicals must meet all applicable federal, state and local regulations. All chemicals must be stored in the proper compatible containers. Chemical containers must be stored segregated or separated according to compatibility so that they cannot accidentally come into contact with each other to cause a reaction such as a fire, explosion, or release of toxic or flammable gases or vapors. All oil and chemical storage locations should be located indoors where possible and must be approved by the Environmental Coordinator prior to materials being brought on-site. Storage of empty containers in unapproved locations is prohibited.

Contractor's inventories of chemicals should be kept as low as practical. All chemical containers must be LABELED with the chemical name and its immediate hazard as indicated on the MSDS. Contractor shall maintain proper spill response equipment in the vicinity of all oil and chemical storage areas. Refer to Secondary Containment and Rainwater Release Records for further requirements.

No chemicals or oil are permitted to be stored on the disposal area footprint of any Coal Combustion Byproduct (CCB) landfill or disposal impoundment facility.

For all bulk storage fuel containers in use or planned for use by Contractor, the fuel quantities consumed from these containers shall be reported to the FE Representative on a monthly basis. Contractor shall ensure all fuel storage containers are closed and sealed when not actively conducting filling operations per the requirements of 40 CFR Part 63 and other applicable regulations and statutes. Contractor shall also comply with all submerged filling (i.e., nozzle actually in liquid, fill tube at bottom of tank, etc.) requirements applicable to their temporary, bulk fuel

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containers per applicable state laws and regulations.

In the event of an oil or chemical spill, Contractor shall notify the FE Representative IMMEDIATELY.

2.3 STORMWATER MANAGEMENT AND STORM DRAIN PROTECTION

Many storm drains lead directly to a waterway (ie: stream, river, lake, ditch, etc.). These storm drains are typically painted red, affixed with permanent lettering or identified with a sign. Some storm drains are permanently covered with a removable drain plug, others have temporary covers. Contractors are not permitted to remove any of these devices.

The discharge of any material other than uncontaminated stormwater is strictly prohibited. Examples of materials prohibited from discharge/release include:

- *Any amount of oil or oil-contaminated liquid, including fuel oil, gasoline, vehicle fluids, grease, lubricants and oil based paints and solvents
- *Any amount of chemical or chemical contaminated liquid, including process chemicals, acids, bases, solvents, cleaners, lime, scrubber sludge and soda ash
- *Any amount of material or debris, including coal, coal combustion byproducts (CCBs), dirt, sand, gravel and vegetation
- *Any amount of process water, either contaminated or uncontaminated, including water leaks from transport lines, water from blasting trucks and raw water or fire protection water used for any purpose other than fire protection/fighting.

Contractors must inspect the work area for environmental risks before starting any work which could result in a prohibited discharge. Use of good housekeeping measures and Stormwater Best Management Practices (BMPs) are to be implemented to ensure that materials and contaminants are not entering or discharging to the stormwater drains. BMP(s) are physical, structural or managerial practices employed before, during, and/or after the Work have been proven and accepted to help prevent or reduce pollution. BMP(s) shall be implemented wherever possible to minimize potential impacts to FE's operations. Contractors must ensure all storm drains leading to a waterway are protected by:

- *covering with absorbent pads or socks
- *building a temporary dike with absorbent material
- *covering with temporary spill mats
- *plugging drains

Contractors may not redirect any stormwater, process water or wastewater to a waterway or discharge point without prior approval

If a discharge or imminent discharge of a prohibited material occurs, Contractor shall notify the FE Representative IMMEDIATELY.

2.4 SECONDARY CONTAINMENT AND RAINWATER RELEASE RECORDS

All oil and bulk chemicals in quantities 55 gallons and greater must be stored in double-walled tanks or situated within secondary containment structures designed to hold a minimum of 110% of the capacity of the tank/tote/drum. Contractor may release rainwater that accumulates within

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secondary containment structures only if the water has been visually inspected and free from contamination. This visual inspection along with the date and time of the release must be documented in writing each time such a release occurs. Contractor shall provide these written release records to the FE Representative on a monthly basis.

Contractor shall drain secondary containments promptly after a rain event. If accumulated water is visually contaminated, Contractor shall contact the Environmental Coordinator and shall not release any contaminated water without prior authorization.

2.5 WASTE MANAGEMENT

Prior to the start of any project, Contractor shall provide a description of the types of wastes that will be generated while performing the work to the FE Representative including a description of the process generating the waste, classification of the waste as defined by the USEPA per 40 CFR 261.2 and any applicable state regulation, and estimated volume that will be generated. Contractor shall comply with all federal and state laws and regulations regarding waste generation and its disposal.

Contractors shall only bring on-site the amount of chemicals expected to be used. Contractors must take all unused chemical products with them when leaving.

No aerosol cans, fluorescent lamps, or electronic waste (computers, monitors, circuit boards, nickel-cadmium or lithium ion batteries, etc.) may be placed in the plant trash. No chemicals, oil, or liquids may be placed in the plant trash. Contractor shall not mix its Used Oil with any solvents, chemicals or waste and will segregate each, as appropriate. Under no circumstance shall Contractor land-apply Used Oil on FirstEnergy's work-sites or anywhere else not authorized by law. Contractor shall ensure all hazardous waste remains segregated from other forms of waste and do not become mixed. Contractor shall contact the FE Representative for containerization and storage instructions for all wastes. If any waste is determined to be hazardous, the Contractor shall report the quantity generated on a weekly basis to the Environmental Coordinator.

All hazardous and universal waste storage and disposal activities will be coordinated by the Environmental Coordinator.

Contractors may be charged for these costs if not specifically identified in the contract documents.

2.6 TEMPORARY SEWAGE PERMITTING AND ON-SITE IMPLEMENTATION

Prior to beginning Work, Contractor shall review with the FE Representative all site specific needs for temporary sewage systems (portable toilets or sewage holding tanks), the need for temporary connections to the facility's onsite sanitary treatment system or public sanitary sewer system and who will supply such systems/connections.

If Contractor is providing temporary sewage systems, Contractor shall provide its overall disposal process for such wastes (i.e. temporary connections to the WWTP, public sanitary sewer system, etc.) prior to site mobilization. Contractor shall obtain any temporary sewage permits required

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by the State or Local Agencies prior to bringing such systems on-site.

No connections to the facility's onsite sanitary treatment system shall be made without FE approval. If such approval is granted, it is understood that these facilities are permitted and strict adherence to the following is required:

*No oil or chemical shall be disposed of down drains leading to the on-site sanitary treatment system.

*All sources of water leading to this treatment facility must be turned completely off when not in use. All leaking equipment, toilets, showers and sinks must be turned off until repaired. If such leaks have occurred, report the condition to the FE Coordinator by the end of the shift.

Whether or not a temporary sewage system permit is required for the sewage option implemented by Contractor, all associated sewage permits, inspections, pumping and removal records, etc. shall be maintained on-site and copies shall be turned over to FE Representative upon completion of Contractor's work.

2.7 FUGITIVE DUST AND UNCONTROLLED AIR EMISSIONS

All FirstEnergy facilities have a general obligation to minimize or prevent uncontrolled air emissions and fugitive dust in accordance with Federal, State, and/or Local air permits (e.g. Title V) or nuisance law requirements. Contractors are expected to understand this and to implement measures during their work to fulfill this obligation.

Contractor shall limit the use of products in aerosol cans where possible and utilize products in manual pump devices.

All fugitive dust control measures that Contractors intend to use in the performance of the work scope shall be approved by FE personnel prior to use, including the application of water. Fugitive dust is to be controlled throughout the performance of work. Contractor shall be responsible for supplying and implementing all control measures for fugitive dust it creates during the performance of its work.

Contractors shall not track sediment on plant roads or on FE entrance/exit to public roadways. Contractor must eliminate any sources which could cause fugitive dust on FE plant roads and/or FE entrance/exit to public roadways.

Material handling equipment and large stockpiles of material can require special air permits prior to their mobilization, setup, and/or usage. All intentions to use such equipment and/or any other sources of air emissions must be reviewed and pre-approved by FE personnel before mobilizing such equipment. Contractor shall obtain and pay for all necessary permits prior to the on-site mobilization and operation of this equipment and shall follow all permit and/or exemption requirements to maintain compliance.

Vacuum truck contractors must maintain the vehicle baghouse controls to minimize fugitive emissions. All fugitive emissions must be controlled while unloading materials at designated unloading or disposal areas.

Prior to commencing any demolition activities of any permanent structures, Contractor and FE personnel shall jointly agree who will submit and pay for all inspections and notifications required by Federal, State, and/or Local

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agencies.

Contractor is not permitted to conduct any open burning activities until receiving written permission from FirstEnergy. Contractor's application(s) for any permits required by Federal, State, and/or Local agencies shall be coordinated through the FE Representative and Corporate Environmental.

2.8 AIR ISSUES

2.8.1 HVAC

HVAC contractors working at the facility must be certified to handle refrigerants and must maintain records as required by 40 CFR Part 82 subpart F when repairing and/or disposing appliances containing refrigerants.

2.8.2 ASBESTOS

Contractors who handle any asbestos containing materials must be certified and maintain records required by OSHA and EPA (40 CFR Part 61 Subpart M). If an unlicensed Contractor suspects or discovers any asbestos containing material, work shall be immediately stopped and reported to the FE Representative.

2.9 MANAGEMENT OF SLUDGES AND SLURRIES

All sludges and slurries, if practical, will be managed at the point of generation to a state of "no free liquid". "Free liquid" is defined as freely flowing liquid/water emanating from the material. If the material can not practically be managed to a "no free liquid" standard at the point of generation, then it will be rendered to that condition prior to shipment off site or placement in the on-site disposal facility (with the exception being permitted disposal impoundments). All specific methods for these management techniques must be approved by the Environmental Coordinator prior to beginning the work.

Sludges and slurries are required to be loaded and transported by Contractor with a ZERO spill tolerance which includes: no leaks from tail gates, no transfer of waste from wheels or axles to road surface, no deposition of waste outside permitted areas, no dusting of waste from open top trucks, etc. This applies to cleanouts of oil/water separators, grit basins, settling basins, lagoons, sumps, sedimentation ponds, impoundments, and similar facilities.

3.0 Checklist of Requirements

Permits, Licenses and Inspections

*All will be secured by Contractor and provided to FE Representative within 5 days of receipt

Emergency Preparedness and Notification

*Prior to start of work, site specific environmental emergency response procedures shall be reviewed and notification procedures for environmental situations established

*Immediate notification of discharges or imminent discharges of a prohibited material

Discharge Prohibition

*The discharge of any material other than uncontaminated rainwater is strictly prohibited including any amount of oil, chemicals, debris, coal, process water, etc.

Spill Prevention/Response

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*Spill response equipment easily visible and in immediate vicinity of all oil containing equipment (trucks, vehicles, cranes, mobile lighting, fork lifts, etc.) and all storm drains

*Truck mounted portable tanks must have spill response equipment on the truck

*No leaking vehicles, equipment or containers of any type

*Truck beds free and clear of any debris

*Portable containers (tanks, totes, drums) tightly sealed when not in use

*Storm drain protection in place

*Prompt and correct clean up of Incidental Spills with notification to the FE Representative before end of shift

*Immediate notification of Emergency Response Spills with response measures enacted

Oil Containing Equipment

*Temporary containments are required underneath all vacuum trucks when operating

*Daily inspections of all industrial trucks, vehicles, cranes, fork lifts, mobile lighting, etc.

Oil/Chemical Storage

*Oil/Chemicals may only be stored in locations approved by the Environmental Coordinator.

*MSDS of all oil/chemicals shall be provided to FE Representative prior to arrival on site

*Oil/Chemicals in containers 55 gal or greater shall be stored in secondary containment structures or in double-walled tanks

*Proper labels in place including chemical name and immediate hazard

*Tank level indicators functioning properly

*Secondary containments free from accumulated rainwater

*Documentation of release records provided to FE Representative on a monthly basis.

Waste Management

*Prior to the start of any project, provide description of wastes to be generated

*Only bring on site the quantity of chemical expected to be used. Remove all unused products when work is completed.

*Segregate by waste type (aerosol cans, fluorescent lamps, batteries, etc.) and do not place in the plant trash

*Satellite accumulation area drums placed and labeled properly with lids closed and fastened

Fugitive Dust and Uncontrolled Air Emissions

*Utilization of approved dust control measures

*No sediment/dirt/material may be tracked on plant roads or on entrance/exit to public roads

Sanitary System Connections

*Prior to beginning work, all needs for temporary sewage systems will be evaluated and connections determined.

*No chemicals added to sinks, toilets, etc.

*No unattended hoses or water sources

Air Issues

*HVAC contractors must be certified to handle refrigerants

*Asbestos Containing Material handled by certified contractors and non-certified Contractors shall stop all work if suspected ACM is present.

Sludges and Slurries

*Sludges and slurries loaded and transported with zero spill tolerance

*If practical, manage at the point of generation to a state of "no free liquids"

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CONTRACTOR PERFORMANCE REQUIREMENTS

Clarifications and additional requirements above and beyond those related to specific topics covered under FirstEnergy Service Company General Terms and Conditions for Purchase of Labor Services are contained within this document. These requirements do not replace the General Terms and Conditions, but rather require additional rigor and performance of the parties. These additional requirements shall be satisfied in conjunction with the General Terms and Conditions.

1. CONNECTIONS FOR ATTACHING EQUIPMENT

Contractor shall cooperate with Purchaser's various equipment suppliers to coordinate the design of connections, to ensure proper fit and assembly in the field.

All pipe connections shall be in accordance with American National Standards Institute (ANSI) standard. Flange faces shall be true and at right angles to the axis of equipment and shall be in accordance with the released drawings as to alignment, level, angle, plane, dimensions and detail.

All bolting materials shall be to the ANSI, heavy classification. All nuts subject to removal shall be casehardened.

2. WELDING REQUIREMENTS

Contractor shall adhere to all of Purchaser's requirements for performing welding at Purchaser's Site as specified in Purchaser's welding policies and procedures, a copy of which shall be provided to Contractor prior to the start of any welding by Contractor. Purchaser shall have the right to modify any of the requirements of its welding policies and procedures at any time, without advance notice.

Note: The below requirements (Sections 3 through 12) are applicable for equipment and material to be furnished by Contractor in those cases for which Purchaser has not provided to Contractor a separate technical specification or other technical guidance addressing such requirements.

3. EQUIPMENT AND MATERIAL REQUIREMENTS

Unless otherwise specified, all equipment and material supplied by Contractor and permanently incorporated in the Work shall be new and both workmanship and material shall be of good quality. Contractor shall warrant that design of equipment does not incorporate any obsolete items.

Contractor shall, if required by Purchaser, furnish satisfactory evidence as to the source of supply and quality of material to be ordered and the delivery date expected for each item for which it is responsible.

Contractor shall furnish test specimens or samples whenever required by the specifications or for proper determination of the qualities of material to be furnished under the Agreement.

Defective material shall not be repaired and used in the construction of the equipment without the prior approval of Purchaser's Representative.

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It shall be the responsibility of Contractor to store and protect any equipment or material supplied by Contractor in accordance with manufacturer's recommendations and the requirements of the Agreement.

Any material of foreign manufacturer must meet or surpass all specifications and certifications of domestic manufacturing, including but not limited to, ASME and/or ASTM Code. Contractor must notify Purchaser immediately when Contractor is contemplating utilizing any material manufactured in China, for which Purchaser has the sole right to accept or reject such material. Purchaser requires advanced notification of shipments from foreign sources of any pressure retaining material or components. Asbestos, asbestos products, lead paint, and PCB's shall not be utilized in the fabrication, assembly, or construction of equipment.

Purchaser expects Contractor to exercise commercially reasonable efforts in purchasing materials, equipment, and services associated with extra/cost reimbursable Work performed in conjunction with firm price and time and material agreements to minimize the cost to Purchaser. Appropriate considerations shall be given to material and equipment quality, as well as established production schedules.

4. CONTRACTOR'S TECHNICAL ASSISTANCE FOR INSTALLATION AND START-UP (FOR EQUIPMENT SUPPLIED BY CONTRACTOR ONLY)

If requested by Purchaser, Contractor shall furnish such personnel to perform the following technical services:

- Advise proper erection of material supplied by Contractor
- Advise start-up and initial operation thereof
- During initial stage of operation instruct Purchaser employees in the proper operation of equipment

Purchaser will notify Contractor in writing in advance of the date on which Purchaser desires any such personnel to report for work and determine current charge rates for such service. Charges for such services will be covered by either a Change Order or a separate purchase order, if not specifically covered in the Agreement.

All such personnel shall report to Purchaser's Representative upon arriving at Work site and prior to assuming duties and upon leaving at completion of duties.

5. DRAWING AND OPERATING INSTRUCTIONS (APPLIES TO MATERIAL AND/OR EQUIPMENT ONLY)

Contractor shall supply three (3) hardcopy sets of drawings and operating and maintenance instructions and one (1) electronic version, unless other specified, to Purchaser within the time stipulated. Payment may be withheld for inadequate or late delivery.

Sets of all necessary installation, operating, and maintenance instructions shall be forwarded as soon as possible, but in no event later than ninety (90) days before initial operation of equipment or shipment date of the material.

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Installation, operating, maintenance and instruction manuals shall incorporate the following:

- Manufacturer's mechanical parts list of all functional components of system
- Drawing and wiring control diagrams

List shall give system unit number, manufacturer's model number, drawing number, spare parts data, and expected life for each item of equipment. The manual shall have sufficient information that qualified personnel without previous training or information can install and operate the equipment/system without assistance from manufacturer's representative.

6. MANUFACTURE AND STANDARDS

All equipment, no matter where manufactured, shall be manufactured, shop assembled and tested to United States standards unless prior written approval to the contrary is obtained from Purchaser's Representative.

Contractor shall submit for review to the Purchaser's Representative a specific list of equipment and/or material contemplated to be or foreign manufacture thirty (30) days prior to ordering such material. All foreign produced material must meet and be tested to U.S. standards, and all testing documentation must be submitted.

Lubricants, hydraulic fluids, coolants, etc. shall be of United States manufacture.

Wherever equipment is manufactured, all screw threads, bolts, nuts, fasteners, bearings, seals, couplings, gear, lubrication fittings, pipe, hose, pipe fittings, valves, conduit fittings, electrical connectors, and any other parts of similar nature shall be according to English units to United States standards.

7. PREPARATION FOR SHIPMENT

Contractor shall be responsible for shipment preparation, shipment, and delivery. Any material requiring special temperature or climate control shall be identified in writing to Purchaser's Representative ninety (90) days prior to shipment. The basic equipment shall be shop assembled, fitted, match marked and then dismantled to the extent necessary for shipping in largest practical sections. Complete assemblies requiring the least possible field assembly are required. Sufficient notice shall be given to Purchaser's Representative prior to the time of dismantling and shipping so that Purchaser's Representative or its third party designated representative may inspect the completed shop work.

Contractor shall tender the Work for acceptance to ship by notifying Purchaser's Representative, in writing, that the Work is ready to leave Contractor's premises. Such notification shall be forwarded to Purchaser together with three (3) copies or more of all specified inspection and ship test reports as required by the Agreement. Purchaser, after assuring that the Work has met the shop test and other requirements as specified by the Agreement, shall notify Contractor that the equipment is acceptable to ship. If Purchaser considers the Work unfit for acceptance to ship, Purchaser shall promptly, after receipt of inspection reports, so notify Contractor

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and list the reasons therefore. Contractor shall remedy any faults that are described, provide a revised shipping schedule for Purchaser's approval, and again tender the equipment for acceptance to ship. If, prior to receipt of the acceptance to ship from Purchaser, the equipment is disassembled, relocated, or removed from Contractor's premises or otherwise rendered unfit for inspection or test, any expense required to make the equipment again ready for acceptance to ship shall be paid by Contractor, unless agreed otherwise.

All nozzle ends, gasket surfaces, flange faces and exposed threaded parts shall be cleaned, greased, and protected with suitable material; all female threaded openings shall be closed with protective plugs. All equipment shall have suitable weather protection, blocking, straps and skids to avoid damage in transit, unloading, and during work site storage.

All nuts, bolts, gaskets and miscellaneous loose erection materials are to be bagged or boxed, securely attached to the equipment piping, etc., weather protected for open field storage, and clearly marked as to content.

Purchaser may elect to have Contractor store equipment at its facility for shipment considerations, or other reasons. Contractor and Purchaser shall mutually agree on storage cost. However, Contractor may invoice for the Agreement price less the cost for delivery of equipment, contingent on receipt by Purchaser of documentation that equipment will be stored properly, is properly insured and Purchaser has copies of all forms regarding shipment taxes, etc. Contractor shall also specify notification requirements to allow Purchaser to schedule deliveries.

8. QUALITY ASSURANCE

Contractor shall have a documented Quality Program that provides, in sufficient detail, an effective methodology for controlling quality for Contractor's scope of supply as detailed in the specification, and results in a product of service that meets specification requirements.

The Quality Program shall describe, as a minimum, the following activities as applicable to Contractor's scope of supply.

- Document Control System
- Procurement Control System
- Special Process Control (welding, NDT, etc.)
- Identification of Materials and Parts
- Calibration of Measuring and Test Equipment
- Control of Nonconforming Material

9. QUALITY RECORDS

As applicable, the following information shall be submitted by Contractor to Purchaser's Representative for review and concurrence, prior to the start of manufacturing:

- Quality Program
- Welding procedures, procedure qualification, and welders' qualification requirements
- Nondestructive test procedures, acceptance criteria, personnel qualification requirements

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- Description of acceptance inspections and tests to be performed
- Performance test procedure with acceptance criteria
- Types of records and reports to be submitted with the finished product

Contractor shall submit the following information when requested by Purchaser's Representative:

- Material test reports
- Inspection, NDT and performance test reports

10. FINAL/AS-BUILT DRAWINGS

Contractor shall indicate "as-built" dimensions for mating parts furnished others (anchor bolts, flange location, bolt hold size, etc.). Should modifications be required to materials/equipment after shipment is made to the Work site, Contractor shall revise "as-built" drawings within thirty (30) days to document "as-installed" dimensions and shall be submitted as required by Purchaser.

Contractor shall maintain throughout the duration of the project a complete set of construction issue drawings marked up showing "as-built" conditions. The drawings are to be distinctly marked as the project progresses to show all deviations, revisions, additions, or deletions performed by the Contractor during the project. Purchaser reserves the right to review the condition of these as-built drawings at any time. Failure of the Contractor to maintain these drawings updated throughout the project may be cause for the Purchaser to withhold progress payment until the condition is satisfied. Within thirty (30) calendar days of the completion of the project, the Contractor shall submit to the Purchaser one (1) complete set of "as-built" drawings. If Contractor has authorized changes in the field or has modified equipment in the field, drawings shall reflect those changes/modifications. Payment retention may be held until such time that the "as-built" drawings are received and it has been verified by the Purchaser that all "as-built" conditions are recorded.

Contractor submitted final drawings/as-builts shall comply with all of the requirements specified in the Purchaser provided specifications addressing drawings requirements.

11. DRAWINGS AND SPECIFICATIONS FURNISHED BY PURCHASER'S REPRESENTATIVE

Any discrepancies in the drawings and/or specifications shall be referred to the Purchaser's Representative for interpretation and decision; otherwise, Contractor shall furnish everything called for by either drawings or specifications even though not called for by both.

Figured dimensions shall take precedence over scaled dimensions; detailed drawings over general drawings.

Contractor and his suppliers shall not use any design drawings, specifications or documents for other than the purpose intended under this Agreement, without the prior written approval of the Purchaser.

12. RIGHT OF ACCESS/INSPECTION FOR SHOP FABRICATED EQUIPMENT/MATERIAL

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Contractor hereby agrees to an inspection by Purchaser's Representative or its third party designated representative of all Work and material furnished under the Agreement.

Contractor shall at all times furnish access to Purchaser's Representative or its third party designated representative to the Work and to the premises used by Contractor and shall provide it every reasonable facility for the purpose of inspection, even to the extent of discontinuing a portion of the Work temporarily.

Purchaser's Representative or its third party designated representative shall at all times have access to the Work whenever it is in preparation. Contractor shall provide facilities, test equipment, tools or instruments that are necessary to facilitate inspection or survey. These inspections will include, but not be limited to, the verification and implementation of Contractor's standard material control and in-house inspection procedures.

Shop surveillance will be performed by Purchaser's Representative or its third party designated representative, however, these surveillance efforts will not relieve Contractor of its responsibilities under the Agreement and shall not be considered a waiver of warranty or other rights.

Since the intent is for Purchaser's Representative or its third party designated representative to perform shop surveillance, no acceptance of the equipment or material by Purchaser's Representative or its third party designated representative shall be made during such shop surveillance in Contractor's plant. Any lack of rejection of the equipment or material by Purchaser Representative or its third party designated representative during shop surveillance shall not constitute acceptance of the equipment or material.

If the specifications, law, ordinances, or any public authority require any Work to be specially tested or approved, Contractor shall assume the cost thereof, unless stated otherwise, and shall give Purchaser's Representative or its third party designated representative ten (10) calendar days written notice and seventy-two (72) hour telephone confirmation of its readiness for inspection or testing for which a Purchaser requirement to witness has been stipulated. If any such Work should be covered up without the consent of Purchaser, the Work shall be uncovered for inspection at Contractor's expense.

If the results of the tests conducted indicate that the equipment or material does not comply with the performance requirements set forth in the drawings or specifications, Contractor shall, at Contractor's expense, make all necessary adjustments, repairs, replacements or changes in order to obtain the required performance level. Until the required performance level is achieved, all subsequent tests, to be witnessed by Purchaser's Representatives or its third party designated representative, shall be made at Contractor's expense, unless said testing failure is determined not to be the fault of, or beyond the control of Contractor, in which case the tests shall be treated as extra work.

All equipment or material produced by Contractor shall undergo site-receiving inspection.

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CONTRACTOR SITE REQUIREMENTS

Clarifications and additional requirements above and beyond those related to specific topics covered under FirstEnergy Service Company General Terms and Conditions for Purchase of Labor Services are contained within this document. These requirements do not replace the General Terms and Conditions, but rather require additional rigor and performance of the parties. These additional requirements shall be satisfied in conjunction with the General Terms and Conditions.

1. MANPOWER/RESOURCES

Contractor shall furnish the total manpower requirements including supervisors, craft labor and subcontractors required to secure the progress and required quality of Work as herein stipulated.

Contractor's personnel employed on this project shall be skilled and qualified in this type of Work and efficiently and effectively supervised. Contractor shall provide a Project Superintendent, competent in the specified type work, familiar with the Specifications, and acceptable to Purchaser, who shall be at the site at all time Work is in progress. The Project Superintendent shall represent and have authority to make binding commitments and act on behalf of Contractor.

Contractor shall, when so directed by Purchaser's Representative in writing, promptly remove from the site any Contractor employee, or any of its subcontractors' employees.

On Time and Material Contracts, Purchaser shall retain the right to stipulate the number of Contractor personnel on the job.

2. WORK CONDITIONS/SITE REGULATIONS

2.1 BUILDINGS

Contractor shall not erect or install any buildings, change rooms, or storage facilities at the work site without prior written approval from Purchaser as to the locations and configurations of such buildings, change rooms, or storage facilities.

Contractor shall, unless otherwise stated, include in its Proposal the necessary cost for furnishing and removing its construction field office, employee clothes change area, tool and material storage, etc. Purchaser will approve site location of all building facilities and must approve buildings prior to the commencement of work.

2.2 COMMUNICATIONS

Contractor shall comply with the communications requirements as stated in the Radio Controlled Equipment Guidelines and the Telecommunications Guidelines.

2.3 PERMISSION TO OPERATE EQUIPMENT

Contractor shall not operate any valves, electrical switches, or set in motion any machinery that is part of Purchaser's property without first obtaining approval from the designated Purchaser Representative. This

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includes the permanent equipment being supplied by Contractor. This requirement does not apply to construction equipment and construction machinery supplied by Contractor.

2.4 WORK SITE WORK RULES

Contractor shall abide by all environmental regulations and general site regulations, and shall establish a set of work site work rules that shall be enforced. Site regulations and work site work rules shall include, but not be limited to, such items as start and quit times, break rules, parking, visitors, site security requirements, substance abuse rules, tagging procedure rules, and respirator fit rules (all employees must be clean shaven in the area between skin and face piece sealing surface to permit respirator fit). Please refer to the Fossil Generation Contractor Safety Requirements, the Fossil Generation Contractor Environmental Requirements, and the Fossil Generation Contractor Substance Abuse Compliance Specification.

If any person does not intend to abide by the plant rules, including those regarding site access and regarding drug and alcohol testing, that person should not enter the site. Such an individual will be subject to removal from the site and/or other disciplinary action. Each Contractor is directly responsible for each of its employees and for its subcontractors.

Purchaser reserves the right to enter and/or inspect Contractor's work, work area, vehicles, toolboxes, storage areas, etc. at any time.

2.5 SECURITY REQUIREMENTS (Contractor shall also comply with Purchaser's individual station requirements, which may have different requirements than the requirements of this Section 2.5)

2.5.1 Site Access

Means of Access - Contractor, its employees, and suppliers shall enter and exit the station property only through those gates designated for their use. Contractor shall be responsible for enforcing this provision.

Parking/Use of Plant Roadways - Contractor and its employees shall park their personal vehicles in areas designated by Purchaser's Representative. Contractor's employees who have specific permission from Purchaser's Representative to drive an automobile or truck over plant roadways must drive at safe speeds, not to exceed posted limits and obey all traffic signs. Purchaser shall not be responsible for any damages to personal vehicles including, but not limited to damages resulting from stack fallout, vandalism, painting, or weather.

2.5.2 Personnel Registration

Contractor's employees working at the site one day or less shall be registered on the Visitor/Employee Register Form and issued a temporary security pass by Purchaser's Representative or security personnel. Contractor will direct any unregistered employee to the registration office.

Contractor shall use the Fossil Contractor Safety Orientation Attendance Sheet (X-3920) to register Contractor's employees working for more than one day. A copy of Form X-3920 shall be maintained for each Purchase Order and/or Firm Price job. Immediately upon completing the FE contractor orientation, the Fossil Contractor Safety Orientation Attendance Sheet, Contractor shall forward the form to Purchaser's Representative. Contractor

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shall update and submit the form to Purchaser's Representative with each addition or deletion to the sheet.

2.5.3 Tool Registration - Contractor's Employees' Personal Tools

Prior to entering Company property, Contractor's employees shall register personal tools/equipment they will be bringing onto Company property. Security personnel assigned to monitor the gate or local facility management will assist Contractor's employees to complete the Tools, Equipment and/or Materials Issue Form X-2941. When leaving Company premises Contractor's employees' vehicles and tool bins may be inspected by Security personnel or local facility management to ensure that contents match the listing on the Contractor Employee Tool Register Form.

2.5.4 Contractor's Tools & Equipment Identification

Contractor's tools and equipment shall be marked by some permanent, readily identifiable means before they are brought onto the site. Contractor's tools must not be marked in the same color of the power station's tools where the Work is being performed. No painting of tools shall be permitted after they are on site.

Power Station Tool Colors

Contractor and subcontractor's tools shall be painted with a color other than the respective station's color prior to being brought on station property.

STATION	COLOR
Ashtabula	
Bay Shore	
Bruce Mansfield	
Eastlake	
Fort Martin	Yellow
Harrison	Blue, Orange
Hatfield	Orange
Lake Shore	
Mitchell	Orange
Pleasants	Blue, Orange-turbine tools only
Springdale	None
WH Sammis	

Additional tools or equipment received from outside sources by Contractor during the course of the job shall be presented with an invoice or equivalent certification of ownership to Purchaser for addition to the inventory list and shall be marked, as required by above paragraph, in the presence of Purchaser.

All tools, equipment, and materials shall be inventoried in the presence of Purchaser before they are loaded or boxed for removal from the company property.

Contractor is responsible for the security of their tools, materials, and equipment while on Purchaser's property. It is recommended that all toolboxes be locked with stainless steel case hardened padlocks.

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No services, supplies, tools, or materials will be available from Purchasers' facilities. Contractor shall not solicit or receive services, supplies, tools, or material from Purchasers' storerooms, personnel, or other sources unless instructed to do so in writing by Purchaser's Representative.

Any of Contractor's employees who exit a personnel or vehicle gate with any Company - owned tool(s) (items not listed on the Contractor Employee Tool Register Form) shall have in their possession the Tools, Equipment, and/or Materials Issue Form X-2941 signed by both Contractor's Project Superintendent or designated representative and Purchaser's Representative. Purchaser shall furnish Contractor with Tools, Equipment and/or Materials Issue Form and instructions for use upon Contractor's request.

2.6 PURCHASER'S FACILITIES AND UTILITIES (Contractor shall also comply with Purchaser's individual station requirements, which may have different requirements than the requirements of this Section 2.6)

2.6.1 Drinking Water

At existing Purchaser owned facilities, Purchaser will make drinking water available at designated locations in the facility. It will be Contractor's responsibility to transport water and to furnish ice for its employees.

2.6.2 Temporary Heat

Contractor shall furnish temporary heat. Only UL listed heating devices shall be utilized on the site. Open fires are NOT permitted at any time.

2.6.3 Elevators

Unless authorized by Purchaser, Purchaser's elevators shall not be used for personnel transportation or as freight elevators. Purchaser shall incur no liability for interruptions of service, if Purchaser allows Contractor to use Purchaser's elevators. Contractor shall promptly correct any damage done to the elevators.

2.6.4 Compressed Air

Purchaser may, at Purchaser owned facilities, make compressed air available in limited quantities at existing outlets. Purchaser shall incur no liability for interruptions of service. Contractor is required to make connections and run lines from those points. Contractor shall notify Purchaser of requirements (pressure (psi), flow (scfm), etc.) prior to mobilization.

2.6.5 Temporary Electrical Power

Purchaser may, at Purchaser owned facilities, make temporary power available in limited quantities at existing outlets. Purchaser shall incur no liability for interruptions of service. Purchaser's authorized electrician shall make all connections ONLY. Contractor shall notify Purchaser of requirements (voltage, current, etc.) prior to mobilization.

2.6.6 Utilities

Contractor shall be responsible to notify the applicable utility (gas, telephone, oil, water company, etc.) and confirm with a site visit locations of their underground utilities within Contractor's Work area prior to any site excavation. Contractor shall comply with any applicable laws regarding utility notification and shall instruct its employees on the utility

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locations and requirements in working around such utilities. Contractor shall also comply with the requirements of the FirstEnergy Investigate Before You Dig Process.

2.7 EQUIPMENT, MATERIAL - DELIVERY AND HANDLING

It shall be Contractor's responsibility to receive, unload, handle, inventory, store, and protect all Contractor and Purchaser furnished material and equipment delivered after mobilization and in accordance with all manufacturers' recommendations.

Storage and laydown areas shall be subject to Purchaser's approval.

For material and equipment furnished by Purchaser and to be installed by Contractor, Contractor shall inventory all receipts and notify Purchaser's Representative in writing of any deficiencies in the quantity and/or quality of those materials with respect to the Specifications and drawings within five (5) working days after receipt.

Contractor shall provide any tool/material trailers required to adequately store and secure any Contractor or Purchaser furnished materials.

Contractor shall pay demurrages and/or detention charges incurred as a result of Contractor's failure to unload equipment or material on time.

Contractor shall maintain a complete and up-to-date record of all Contractor and Purchaser furnished equipment and materials received. Contractor shall provide Purchaser's Representative with all vendor manuals, drawings, instructions, and packing bills of materials that are included with the deliveries.

Contractor shall provide a list of major construction equipment (not small tools) anticipated for use on the project.

Purchaser may, but has no obligation to, lend Purchaser's tools, equipment or materials to Contractor for use on the project. If Purchaser lends tools, equipment or materials to Contractor, Contractor agrees: (i) that Contractor assumes all liability for loss or damage to Purchaser's tools, equipment or materials and will return them in the same condition that they were received; (ii) that Contractor alone shall be liable for any injury or damage resulting from use of Purchaser's tools, equipment or materials; and (iii) that Purchaser provides such tools, equipment or materials "AS IS, WHERE IS," with no representations or warranties, express or implied.

3. WORK COORDINATION

Purchaser reserves the right to perform concurrent work using other contractors, which may potentially interfere with Contractor's Work. Contractor shall afford other contractors reasonable opportunity for the introduction and storage of contractor's materials and for the execution of contractor's work, and shall properly coordinate Contractor's Work with the other contractor's work so that there will be no interference or delay in any manner with the work of Purchaser or of other contractors or with the project and/or Agreement schedule.

If any part of Contractor's Work depends on proper execution or results upon

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the work of any other contractor, Contractor shall cooperate with such other contractors, obtain information from them and give information to them as they require, and shall inspect and promptly report in writing to Purchaser's Representative any defects in such other contractor's work that render it unsuitable for such proper execution and results. Contractor's failure to so inspect and report shall constitute an acceptance of the other contractors' work as fit and proper for the reception of Contractor's Work, except as to defects that may develop in the other contractors' work after the execution of the work.

Contractor recognizes and acknowledges that its price and schedule includes provisions for working in close proximity and, at times, in combined operations with other contractors. Contractor shall cooperate with all other contractors, coordinate its work with theirs, and arrange its activities so as not to interfere or retard progress of the work of the other contractors. In the event of differences of opinion or disputes between contractors, which they cannot readily resolve, such matters shall be referred to Purchaser's Representative for mediation. Purchaser will provide a reasonable resolution, however any incremental costs to Contractor shall be borne by Contractor.

4. WORK LOCATION - EXAMINATION OF SITE

By submission of Proposal, Contractor acknowledges that it and its subcontractors have examined the site in all ways pertinent to performance required by the Specification, and that it has informed itself concerning the physical and geological conditions to be encountered, the character of the Work to be performed, and all matters germane to the Work and services to be performed and/or the material to be furnished under this Agreement. For erection work, failure to examine the site may be grounds for disqualification of the Proposal.

Any records of surface and subsurface conditions, water records and/or other observations that may have been made or caused to be made by Purchaser have been made with reasonable care and accuracy. Such records, when made available to Contractor, shall bear no expressed or implied guarantee as to the accuracy of the records or any interpretation of them. By submission of Proposal, Contractor acknowledges that it has formed its own opinion of all these conditions from an inspection of the site and has put its own interpretation on the records.

08/01/2013